This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

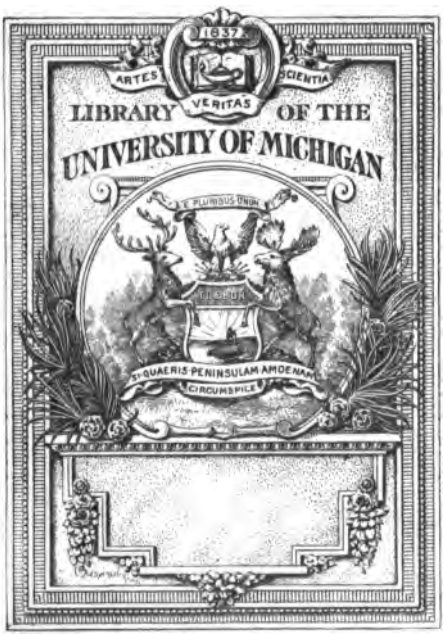
+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

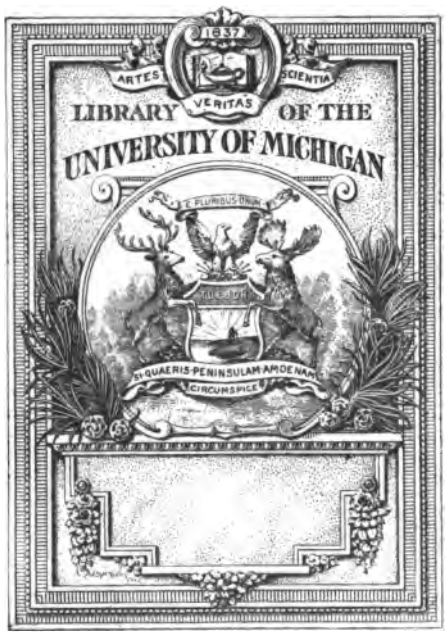
About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`



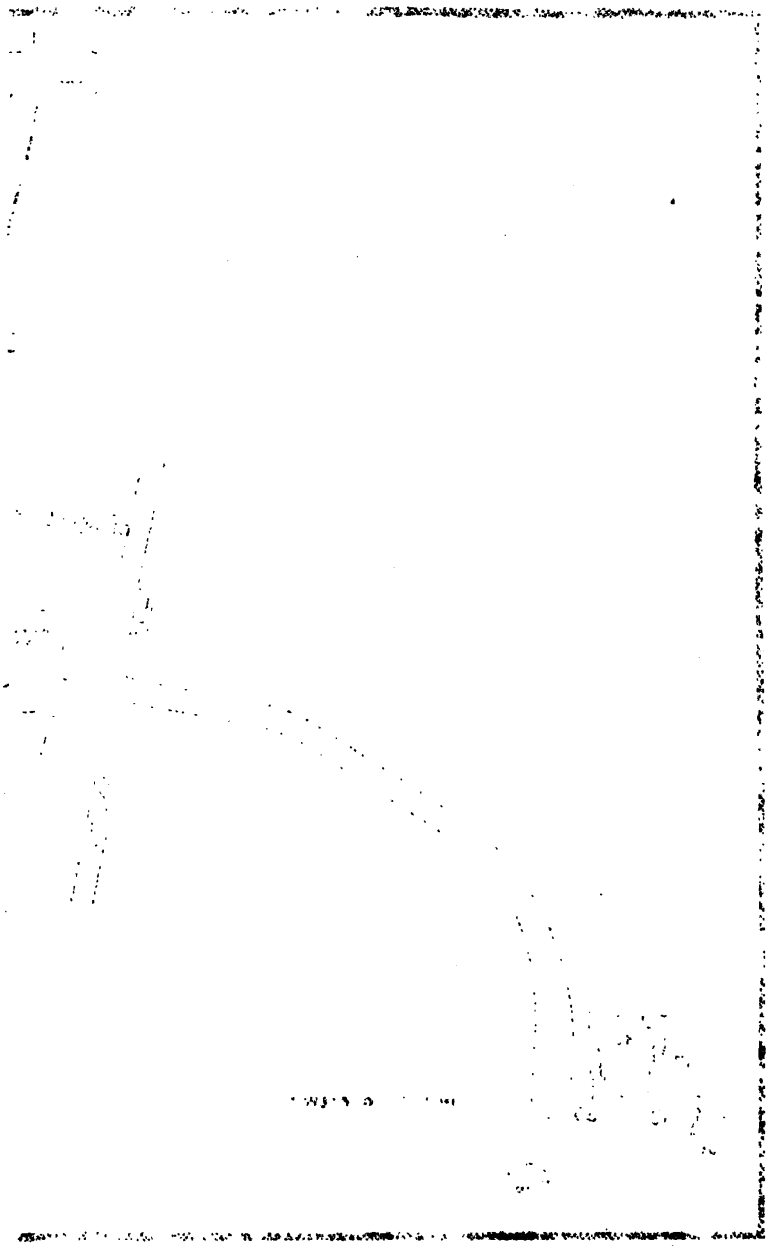
THE GIFT OF
The University.

LD
4587



THE GIFT OF
The University.

LD
4587



CATALOGUE

OF

PRINCETON UNIVERSITY

ONE HUNDRED AND SIXTY-SIXTH YEAR

1912-1913

PRINCETON, NEW JERSEY
PUBLISHED BY THE UNIVERSITY
1912

PRINCETON
UNIVERSITY
PRESS

CONTENTS

PAGE

OFFICE HOURS, ... 8
CALENDAR, ... 10
FACULTY MEETINGS, ... 13

PART I.—OFFICERS OF THE UNIVERSITY

Trustees of the University, ... 17
Alumni Trustees, ... 18
Standing Committees of the Trustees, ... 19
Faculty and Instructors, ... 20
Stafford Little Lecturer on Public Affairs, . . 39
The Louis Clark Vanuxem Foundation, . . . 39
Officers of Administration, ... 40
Standing Committees of the Faculty, ... 42

PART II.—HISTORY AND GOVERNMENT OF THE UNIVERSITY

Founding of the Log College, ... 45
Forces of the Log College unite with the First Trustees in founding the College of New Jersey, 46
The Charters of 1746 and 1748, ... 46, 48
Foundation of the John C. Green School of Science, ... 64
Title of Princeton University assumed, . . . 65
Plan of Alumni Representation in the Board of Trustees, ... 65
Form of Bequest, ... 66

250536

PART III.—TERMS OF ADMISSION

PAGE

Regular Method of Admission, ... 69
Alternative Method of Admission, ... 70
Entrance Fee, ... 71
Entrance Examinations, ... 71
Freshman Entrance Requirements, ... 78
Freshman Entrance Subjects, ... 81
College Entrance Examination Board, ... 94
New York State Board of Regents, ... 97
Asiatic Students, ... 97
Admission to Special Courses, ... 97
Students Pursuing Partial Courses, ... 98
Admission from Other Colleges, ... 98
Regulation Concerning Secret Societies, . . . 99

PART IV.—SYSTEM AND METHOD OF UNDERGRADUATE STUDY

System of Undergraduate Study
The Freshman Year, ... 104
The Sophomore Year, ... 104
The Junior Year, ... 107
The Senior Year, ... 111
Method of Undergraduate Instruction, . . . 115
The Department of Civil Engineering, . . . 118

PART V.—DEPARTMENTS OF THE UNIVERSITY

The Academic Department
Faculty, ... 127
Courses of Instruction, ... 132
The John C. Green School of Science
Faculty, ... 170
Courses of Instruction, ... 173
Department of Civil Engineering, ... 200

PAGE

THE SCHOOL OF ELECTRICAL ENGINEERING, . . . 209
THE GRADUATE SCHOOL
Degrees, ... 215
Regulations, ... 216
The Graduate College, ... 218
Fellowships, ... 220
Courses of Instruction, ... 229
Directors of Seminaries, ... 280
THE UNIVERSITY LIBRARY, ... 281

PART VI.—EXAMINATIONS, STANDING, AND GRADUATION; HONORS; GENERAL ORDERS; AND PUBLIC LECTURES

Examinations, Standing, and Graduation, . . . 291
Regulations for General and Special Honors, . . 299
Terms and Vacations, ... 305
Regulations Concerning Registration, ... 305
Regulation of Attendance, ... 306
Infirmary Regulations, ... 307
Public Worship, ... 309
Commencement Exercises, ... 309
Public Lectures, ... 310

PART VII.—GROUNDS AND BUILDINGS, AND INSTITUTIONS CONNECTED WITH THE UNIVERSITY

The Campus, ... 315
Nassau Hall, ... 316
Dean's House, ... 317
University Offices, ... 317
Prospect, ... 318
Dickinson Hall, ... 318

PAGE
School of Science Building, ... 318
Marquand Chapel, ... 319
Alexander Hall, ... 320
Isabella McCosh Infirmary, ... 321
Fitz Randolph Gateway, ... 322
McCosh Hall, ... 322
Sun Dial, ... 323
Dormitories, ... 323
Laboratories and Museums, ... 329
Societies, ... 344
Athletic Grounds and Buildings, ... 347
The Princeton University Press, ... 349
The Princeton University Store, ... 350

PART VIII.—EXPENSES, ALLOTMENT OF ROOMS, UNIVERSITY DINING HALLS, UNIVERSITY BILLS, PRIZES, REMISSION OF TUITION, SCHOLARSHIPS, AND CHARITABLE FUNDS

Expenses, ... 353
Rules Governing the Allotment and Rental of Rooms, ... 355
University Dining Halls, ... 362
University Bills, ... 363
Prizes, ... 365
Remission of Tuition, ... 375
Scholarships Founded Between 1853 and 1902, . 377
University Scholarships, ... 379
Endowed Scholarships, ... 380
Endowment and Administration of Scholarships, 386
Funds for Candidates for the Ministry, . . . 387
Charitable Funds, ... 387
Bureau of Student Self Help, ... 388

PART IX.—DEGREES AND HONORS 1911-1912

PAGE
Degrees Conferred, ... 391
Honors and Awards of Fellowships and Prizes, . 398

PART X.—GRADUATE COUNCIL, ALUMNI ASSOCIATIONS, LISTS OF STUDENTS, DIRECTORY, AND INDEX

GRADUATE COUNCIL, ... 411
ALUMNI ASSOCIATIONS, ... 412
STUDENTS OF THE UNIVERSITY
The Graduate School, ... 418
The School of Electrical Engineering, ... 430
Undergraduates
The Senior Class, ... 431
The Junior Class, ... 439
The Sophomore Class, ... 446
The Freshman Class, ... 455
Students Qualifying for Regular Standing, . 466
Specials, ... 468
Students Pursuing Partial Courses, ... 468
GENERAL SUMMARY, ... 469
SUMMARY OF STUDENTS BY STATES, ... 471
ABBREVIATIONS, ... 472
DIRECTORY OF OFFICERS AND STUDENTS, ... 473
INDEX 496

OFFICE HOURS

THE PRESIDENT OF THE UNIVERSITY.—Nassau Hall, 11 A. M. to 1 P. M. daily.

THE TREASURER OF THE UNIVERSITY.—University Offices, 9 A. M. to 3 P. M.; Saturdays, 9 A. M. to 12 M.; July 1 to September 1, 9 A. M. to 12 M.

THE SECRETARY OF THE UNIVERSITY AND THE EDITOR OF OFFICIAL PUBLICATIONS.—Nassau Hall, 9 A. M. to 12.30 P. M., 2 to 5 P. M.; Saturdays, 9 A. M. to 12.30 P. M.

THE REGISTRAR OF THE UNIVERSITY.—Nassau Hall, 8.30 A. M. to 3.30 P. M.; Saturdays, 8.30 A. M. to 12.30 P. M.; July 1 to September 1, 9 A. M. to 12 M.

THE SECRETARY OF BUSINESS ADMINISTRATION, THE SUPERINTENDENT OF GROUNDS AND BUILDINGS, THE UNIVERSITY POWER COMPANY, AND THE PURCHASING DEPARTMENT.—University Offices, 9 A. M. to 4.30 P. M.; Saturdays, 9 A. M. to 12.30 P. M.

THE DEAN OF THE GRADUATE SCHOOL.—Nassau Hall. Office open from 9 A. M. to 5 P. M.; Saturdays, 9 A. M. to 12 M.; July 1 to September 1, 9 A. M. to 12 M. Office hours of the Dean, 12 M. to 1 P. M. daily, except Saturday.

THE DEAN OF THE FACULTY.—Dean's House, 1.30 to 2.30 P. M. daily, except Saturday.

THE DEAN OF THE COLLEGE.—Nassau Hall, 2 to 3 P. M. daily, except Saturday.

THE CLERK OF THE FACULTY AND THE EDITOR OF THE GENERAL CATALOGUE.—Nassau Hall. Office open 9 A. M. to 12 M.; 1 to 4 P. M.; Saturdays, 9 A. M. to 12 M. Professor Collins' office hours, 12.30 to 1.30 P. M. daily, except Fridays and Saturdays.

THE COMMITTEE ON ENTRANCE, Professor Root, Secretary.—6 A Holder Hall, 12.30 to 1 P. M. daily, except Saturday, during June and September.

THE COMMITTEE ON EXAMINATIONS AND STANDING, Dean W. F. Magie, Chairman.—Dean's House, 1.30 to 2.30 P. M. daily, except Saturday. C. H. Jones, Recording Secretary, Registrar's Office.

THE COMMITTEE ON OUT-DOOR SPORTS, Professor McClenahan, Secretary.—The Palmer Physical Laboratory, Room 207, 12.30 to 1 P. M. Mondays and Tuesdays; 12 M. to 1 P. M. Wednesdays, Thursdays and Fridays; or at the office of the Dean of the College, 2 to 3 P. M. daily, except Saturday.

THE COMMITTEE ON NON-ATHLETIC ORGANIZATIONS, Professor Donald C. Stuart, Secretary, The Western Way, 12 M. to 1 P. M., Thursdays.

THE UNIVERSITY FACULTY meets on the first Thursday of the University year, immediately after the opening exercises of the year, and thereafter on the first and third Mondays of each month, at 5 o'clock in the afternoon. The ACADEMIC FACULTY meets *on call only* on the second Monday of each month, at 5 o'clock in the afternoon; the FACULTY OF THE SCHOOL OF SCIENCE meets *on call only* on the fourth Monday of each month, at the same hour. For calendar of Faculty meetings see page 13.

For Catalogues and other numbers of the OFFICIAL REGISTER of Princeton University apply to the Secretary of the University, Princeton, New Jersey.

For information concerning Entrance and Courses of Instruction apply to the Registrar of the University, Princeton, New Jersey.

For information concerning the Graduate School apply to the Dean of the Graduate School, Princeton, New Jersey.

CALENDAR

1912

Sept. 9–21. Examinations for removal of first and second term conditions.

Sept. 12–16. Examinations for admission, held in Princeton only.

Sept. 18. First term begins.

Sept. 19, 3 P. M.–Formal opening exercises.

Sept. 30. Last day for enrolment of Graduate Students at the office of the Registrar.

Oct. 22. Commemoration Day.

Oct. 24. Meeting of the Board of Trustees.

Nov. 27, 1.30 P. M.–Dec. 2, 10.30 A. M. Thanksgiving recess.

Nov. 28. Thanksgiving Day.

Dec. 9–14. Examinations for removal of entrance conditions.

Dec. 18, 1.30 P. M. Christmas vacation begins.

1913

Jan. 2, 10.30 A. M. Christmas vacation ends.

Jan. 9. Meeting of the Board of Trustees.

Jan. 14. Last day for reporting second term electives.

Feb. 5. First term examinations end.

Feb. 6. Second term begins.

Feb. 22. Washington's Birthday. Class of 1876 Prize Debate.

March 15. Last day for receiving applications for Fellowships and Graduate Scholarships.

March 10–15. Examinations for removal of conditions in first term Senior subjects.

March 19, 1.30 P. M.–March 25, 10.30 A. M.–Spring recess.

March 26, 12 M. Meeting of Faculty Committee on Course of Study.

April 10. Meeting of the Board of Trustees.

May 28. End of Senior final examinations.

June 6. End of examinations of the three lower classes.

June 7. Junior Orator and Maclean Prize contests.

June 8. Baccalaureate Sunday.

June 9. Commencement meeting of the Board of Trustees—Annual meetings of the Literary Societies—Class Day.

June 10. 166th Annual Commencement—Alumni Trustee Election—Alumni luncheon.

June 11–14. Examinations for admission, held simultaneously in Princeton and elsewhere.

Sept. 14–27. Examinations for removal of first and second term conditions.

Sept. 18–22. Examinations for admission, held in Princeton only.

Sept. 24. First term begins.

Sept. 25, 3 P. M.–Formal opening exercises.

Sept. 30. Last day for enrolment of Graduate Students at office of Registrar.

Oct. 22. Commemoration Day.

Oct. 23. Meeting of the Board of Trustees.

Nov. 26, 1.30 P. M.–Dec. 1, 10.30 A. M. Thanksgiving recess.

Nov. 27. Thanksgiving Day.

Dec. 15–20. Examinations for removal of entrance conditions.

Dec. 24, 1.30 P. M. Christmas vacation begins.

1914

Jan. 8, 10.30 A. M. Christmas vacation ends.

Jan. 8. Meeting of the Board of Trustees.

Jan. 19. Last day for reporting second term electives.

Feb. 11. First term examinations end.

Feb. 12. Second term begins.

Feb. 22. Washington's Birthday.

Feb. 23. Washington's Birthday Exercises. Class of 1876 Prize Debate.

March 15. Last day for receiving applications for Fellowships and Graduate Scholarships.

March 25, 12 M. Meeting of Faculty Committee on Course of Study.

March 30–April 4. Examinations for removal of conditions in first term Senior subjects.

April 8, 1.30 P. M.–April 14, 10.30 A. M.–Spring recess.

April 9. Meeting of the Board of Trustees.

June 6. End of Senior final examinations.

June 12. End of examinations of the three lower classes.

June 13. Junior Orator and Maclean Prize contests.

June 14. Baccalaureate Sunday.

June 15. Commencement meeting of the Board of Trustees—Annual meetings of the Literary Societies—Class Day.

June 16. 167th Annual Commencement—Alumni Trustee Election—Alumni luncheon.

FACULTY MEETINGS, 1912-1913.

All meetings but the first at 5 P. M.

UNIVERSITY FACULTY: September 19, October 7, 21, November 4, 18, December 2, 16, January 6, 20, February 3, 17, March 3, 17, April 7, 21, May 5, 19, June 2.

JULY, 1912

Su	M	Tu	W	Th	F	S
..	*1*	*2*	*3*	*4*	*5*	*6*
7	*8*	*9*	*10*	*11*	*12*	*13*
14	*15*	*16*	*17*	*18*	*19*	*20*
21	*22*	*23*	*24*	*25*	*26*	*27*
28	*29*	*30*	*31*	..	..	.
..	..	..	..	..	..	..

AUGUST, 1912

Su	M	Tu	W	Th	F	S
..	..	..	..	*1*	*2*	*3*
4	*5*	*6*	*7*	*8*	*9*	*10*
11	*12*	*13*	*14*	*15*	*16*	*17*
18	*19*	*20*	*21*	*22*	*23*	*24*
25	*26*	*27*	*28*	*29*	*30*	*31*
..	..	..	..	..	..	..

SEPTEMBER, 1912

Su	M	Tu	W	Th	F	S
1	*2*	*3*	*4*	*5*	*6*	*7*
8	*9*	*10*	*11*	*12*	*13*	*14*
15	*16*	*17*	18	19	20	21
22	23	24	25	26	27	28
29	30	..	..	..	..	..
..	..	..	..	..	..	..

OCTOBER, 1912

..	..	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	..	..
..	..	..	..	..	..	..

NOVEMBER, 1912

..	..	..	..	..	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	*28*	*29*	*30*
..	..	..	..	..	..	..

DECEMBER, 1912

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	*19*	*20*	*21*
22	*23*	*24*	*25*	*26*	*27*	*28*
29	*30*	*31*	..	..	..	..
..	..	..	..	..	..	..

JANUARY, 1913

..	..	..	*1*	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	..
..	..	..	..	..	..	..

FEBRUARY, 1913

..	..	..	..	..	..	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	*22*
23	24	25	26	27	28	..
..	..	..	..	..	..	..

MARCH, 1913

..	..	..	..	..	..	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	*20*	*21*	*22*
23	*24*	25	26	27	28	29
30	31	..	..	..	..	..

APRIL, 1913

..	..	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	..	..	..
..	..	..	..	..	..	..

MAY, 1913

..	..	..	..	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

JUNE, 1913

1	2	3	4	5	6	7
8	9	10	*11*	*12*	*13*	*14*
15	*16*	*17*	*18*	*19*	*20*	*21*
22	*23*	*24*	*25*	*26*	*27*	*28*
29	*30*	.	.	.	.	.

JULY, 1913

..	..	*1*	*2*	*3*	*4*	*5*
6	*7*	*8*	*9*	*10*	*11*	*12*
13	*14*	*15*	*16*	*17*	*18*	*19*
20	*21*	*22*	*23*	*24*	*25*	*26*
27	*28*	*29*	*30*	*31*	..	..
..	..	..	..	..	..	..

AUGUST, 1913

..	..	..	..	..	*1*	*2*
3	*4*	*5*	*6*	*7*	*8*	*9*
10	*11*	*12*	*13*	*14*	*15*	*16*
17	*18*	*19*	*20*	*21*	*22*	*23*
24	*25*	*26*	*27*	*28*	*29*	*30*
31	..	..	..	..	..	..

SEPTEMBER, 1913

..	*1*	*2*	*3*	*4*	*5*	*6*
7	*8*	*9*	*10*	*11*	*12*	*13*
14	*15*	*16*	*17*	*18*	*19*	*20*
21	*22*	*23*	24	25	26	27
28	29	30	..	..	..	..
..	..	..	..	..	..	..

OCTOBER, 1913

..	..	..	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	..
..	..	..	..	..	..	..

NOVEMBER, 1913

..	..	..	..	..	..	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	*27*	*28*	*29*
30	..	..	..	..	..	..

DECEMBER, 1913

..	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	*25*	*26*	*27*
28	*29*	*30*	*31*	..	..	..
..	..	..	..	..	..	..

JANUARY, 1914

..	..	..	..	*1*	*2*	*3*
4	*5*	*6*	*7*	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
..	..	..	..	..	..	..

FEBRUARY, 1914

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	*23*	24	25	26	27	28
..	..	..	..	..	..	..
..	..	..	..	..	..	..

MARCH, 1914

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	..	..	..	..
..	..	..	..	..	..	..

APRIL, 1914

..	..	..	1	2	3	4
5	6	7	8	*9*	*10*	*11*
12	*13*	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	..	..
..	..	..	..	..	..	..

MAY, 1914

..	..	..	..	..	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	..	..	..	..	..	..

JUNE, 1914

..	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	*17*	*18*	*19*	*20*
21	*22*	*23*	*24*	*25*	*26*	*27*
28	*29*	*30*	..	..	..	..
..	..	..	..	..	..	..

Days upon which the University is not in session are *italicized.*

PART I

OFFICERS OF THE UNIVERSITY

TRUSTEES OF THE UNIVERSITY

THE GOVERNOR OF THE STATE OF NEW JERSEY, *ex-officio*, PRESIDENT OF THE BOARD OF TRUSTEES.

JOHN GRIER HIBBEN, PH.D., LL.D., LITT.D., PRESIDENT OF THE UNIVERSITY and, in the absence of the Governor, President of the Board.

LIFE TRUSTEES

HON. JOHN AIKMAN STEWART, LL.D., SENIOR TRUSTEE.....New York, N. Y.
M. TAYLOR PYNE, L.H.D.....Princeton, N. J.
JAMES W. ALEXANDER, A.M.....New York, N. Y.
DAVID R. FRAZER, D.D.....Short Hills, N. J.
GEORGE B. STEWART, D.D., LL.D.....Auburn, N. Y.
CYRUS H. McCORMICK, A.M.....Chicago, Ill.
JOHN DIXON, D.D.....Trenton, N. J.
MELANCTHON W. JACOBUS, D.D.....Hartford, Conn.
HON. WILLIAM J. MAGIE, LL.D.....Elizabeth, N. J.
HON. BAYARD HENRY, A.M.....Philadelphia, Pa.
SIMON J. McPHERSON, D.D.....Lawrenceville, N. J.
HENRY W. GREEN, A.M., LL.B.....Trenton, N. J.
CHARLES WOOD, D.D.....Washington, D. C.
ARCHIBALD D. RUSSELL, A.M.....Princeton, N. J.
JOHN DEWITT, D.D., LL.D.....Princeton, N. J.
ROBERT GARRETT, B.S.....Baltimore Co., Md.
HENRY B. THOMPSON, B.S.....Greenville, Del.
JOSEPH B. SHEA, A.B.....Pittsburgh, Pa.
EDWARD W. SHELDON, A.M.....New York, N. Y.
STEPHEN S. PALMER.....Princeton, N. J.
HON. JOHN L. CADWALADER, LL.D.....New York, N. Y.
PARKER D. HANDY, A.B.....New York, N. Y.
JOHN M. T. FINNEY, M.D.....Baltimore, Md.
WILLIAM COOPER PROCTER, B.S.....Cincinnati, Ohio.
CHARLES SCRIBNER, A.B.....New York, N. Y.

ALUMNI TRUSTEES

WILLIAM B. McILVAINE, A.M.....Chicago, Ill.
(Term expires, June, 1913.)

WILSON FARRAND, A.M.....South Orange, N. J.
(Term expires June, 1914.)

JOHN W. BARR, JR., A.M., LL.B.....Louisville, Ky.
(Term expires June, 1915.)

ALEXANDER VAN RENSSELAER, A.M. Philadelphia, Pa.
(Term expires June, 1916.)

MATTHEW C. FLEMING, A.M., LL.B...New York, N. Y.
(Term expires June, 1917.)

Treasurer
HENRY G. DUFFIELD, A.B.

Secretary
CHARLES W. McALPIN, A.M.

Supervising Architect
RALPH ADAMS CRAM, LITT.D.

STANDING COMMITTEES OF THE BOARD OF TRUSTEES

Committee on Finance: MR. HANDY, Chairman; PRESIDENT HIBBEN, MR. STEWART, MR. PYNE, MR. MCCORMICK, MR. GREEN, MR. SHELDON, MR. PALMER, MR. PROCTER, MR. SCRIBNER.

Committee on Grounds and Buildings: MR. THOMPSON, Chairman; PRESIDENT HIBBEN, MR. PYNE, MR. ALEXANDER, MR. HENRY, MR. GREEN, MR. RUSSELL, MR. GARRETT, MR. HANDY, DR. FINNEY.

Committee on the Curriculum: REV. DR. JACOBUS, Chairman; PRESIDENT HIBBEN, DEAN FINE, DEAN MAGIE, REV. DR. STEWART, REV. DR. MCPHERSON, REV. DR. DEWITT, MR. THOMPSON, MR. FARRAND, DR. FINNEY.

Committee on the Library and Apparatus: MR. GREEN, Chairman; PRESIDENT HIBBEN, MR. ALEXANDER, REV. DR. MCPHERSON, REV. DR. WOOD, MR. VAN RENSSELAER, MR. RUSSELL, MR. SHEA, MR. SCRIBNER.

Committee on Honorary Degrees: PRESIDENT HIBBEN, Chairman; REV. DR. JACOBUS, MR. MAGIE, MR. SHELDON, MR. MCILVAINE, MR. FARRAND, MR. CADWALADER.

Committee on the Graduate School: MR. PYNE, Chairman; PRESIDENT HIBBEN, DEAN WEST, MR. MCCORMICK, REV. DR. JACOBUS, MR. SHEA, MR. SHELDON, MR. FARRAND, MR. PROCTER, MR. FLEMING.

Committee on Morals and Physical Education: MR. GARRETT, Chairman; PRESIDENT HIBBEN, DEAN MCCLENAHAN, REV. DR. STEWART, REV. DR. DIXON, REV. DR. MCPHERSON, DR. FINNEY, MR. BARR.

Committee on Faculty Minutes: REV. DR. FRAZER, Chairman; PRESIDENT HIBBEN, REV. DR. WOOD, MR. MCILVAINE, MR. BARR.

The stated meetings of the Board of Trustees are held on the fourth Thursday in October, on the second Thursdays of January and April, and on the Monday before Commencement.

*FACULTY AND INSTRUCTORS

JOHN GRIER HIBBEN, PH.D., LL.D., LITT.D.,
PRESIDENT,
Stuart Professor of Philosophy.
Prospect

FRANCIS LANDEY PATTON, D.D., LL.D.,
EX-PRESIDENT,
Stuart Professor of Ethics and the Philosophy of Religion.
Springdale.

CYRUS FOGG BRACKETT, M.D., LL.D.,
Professor of Physics, Emeritus.
14 Prospect Ave.

HENRY BEDINGER CORNWALL, E.M., PH.D.,
Professor of Chemistry and Mineralogy, Emeritus.
12 Morven St.

GEORGE MACLOSKIE, D.Sc., LL.D.,
Professor of Biology, Emeritus.
239 Nassau St.

CHARLES McMILLAN, A.M., C.E.,
Professor of Civil Engineering.
40 Bayard Lane.

CHARLES GREENE ROCKWOOD, JR., PH.D.,
Professor of Mathematics, Emeritus.
Princeton Inn.

THEODORE WHITEFIELD HUNT, PH.D., L.H.D.,
Professor of English.
72 Library Place.

*The faculty list is arranged in four groups: professors, assistant professors, instructors, and assistants. In each group the names occur in the order of academic seniority.

WILLIAM LIBBEY, D.Sc., Princeton,
Professor of Physical Geography and Director of the E. M. Museum of Geology and Archaeology.
Thanet Lodge.

WILLIAM BERRYMAN SCOTT, PH.D., LL.D., ScD.,
Blair Professor of Geology.
56 Bayard Lane.

FREDERICK NEWTON WILLSON, A.M., C.E.,
Professor of Graphics.
Stony Brook.

ALLAN MARQUAND, PH.D., L.H.D.,
Professor of Art and Archaeology and Director of the Museum of Historic Art.
Guernsey Hall.

ANDREW FLEMING WEST, PH.D., LL.D.,
HON. D.LITT. (OXON.),
DEAN OF THE GRADUATE SCHOOL,
Giger Professor of Latin.
90 Bayard Lane.

ALEXANDER THOMAS ORMOND, PH.D., LL.D.,
McCosh Professor of Philosophy.
13 Bank St.

HENRY BURCHARD FINE, PH.D., LL.D.,
DEAN OF THE DEPARTMENTS OF SCIENCE,
Dod Professor of Mathematics.
Absent on leave.

JOHN HOWELL WESTCOTT, PH.D., Princeton,
Musgrave Professor of Latin and Tutor in Roman Law.
200 Mercer St.

WILLIAM FRANCIS MAGIE, PH.D., Berlin,
DEAN OF THE FACULTY,
Henry Professor of Physics.
The Dean's House.

ERNEST CUSHING RICHARDSON, PH.D.,
Librarian.
220 Mercer St.

LEROY WILEY McCAY, D.Sc.,
Professor of Chemistry.
2 Morven St.

HENRY DALLAS THOMPSON, D.Sc., PH.D.,
Professor of Mathematics.
11 Morven St.

GEORGE McLEAN HARPER, PH.D., Princeton,
Holmes Professor of Belles Lettres and English Language and Literature.
36 Mercer St.

PAUL VAN DYKE, D.D.,
Professor of History.
89 Library Place.

HERBERT STEARNS SQUIER SMITH, C.E.,
Professor of Civil Engineering.
58 University Place.

WALTER BUTLER HARRIS, C.E.,
Professor of Geodesy.
Greenholm.

HENRY VAN DYKE, D.D., LL.D.,
Murray Professor of English Literature.
59 Bayard Lane.

ELMER HOWARD LOOMIS, PH.D., Sc.D.,
Professor of Physics.
302 Nassau St.

WALTER MEAD RANKIN, PH.D., Munich,
Professor of Biology.
Curator of the Herbarium.
5 Evelyn Place.

CHARLES FREEMAN WILLIAMS McCLURE, D.Sc.,
Class of 1877 Professor of Zoölogy.
2 Morven St.

GEORGE STEVENSON PATTON, A.M.,
Professor of Moral Philosophy.
Springdale.

HOWARD CROSBY WARREN, A.M.,
Professor of Experimental Psychology.
133 Library Place.

THOMAS MARC PARROTT, PH.D., Leipsic,
Professor of English.
104 Mercer St.

EDMUND YARD ROBBINS, A.M.,
Ewing Professor of Greek Language and Literature.
144 Library Place.

ALEXANDER HAMILTON PHILLIPS, D.Sc., Princeton,
Professor of Mineralogy.
54 Hodge Road.

FRED NEHER, A.M.,
Professor of Chemistry.
148 Library Place.

WILLIAMSON UPDIKE VREELAND, D. ès L., Geneva,
Woodhull Professor of Romance Languages.
180 Mercer St.

STOCKTON AXSON, LITT.D.,
Professor of English.
10 Nassau St.

JOHN HAUGHTON CONEY, A.M.,
Professor of History.
Bayles Farm.

WILLIAM KELLY PRENTICE, PH.D., Halle,
Professor of Greek.
34 Cleveland Lane.

CHARLES HENRY SMYTH, JR., PH.D.,
Professor of Geology.
22 Morven St.

HOWARD CROSBY BUTLER, A.M.,
Professor of Art and Archaeology.
Merwick.

NORMAN KEMP SMITH, D.PHIL., St. Andrews,
Stuart Professor of Psychology.
106 Broadmead.

HOWARD McCLENAHAN, E.E., M.S., LL.D.,
DEAN OF THE COLLEGE,
Professor of Physics.
Joseph Henry House, College Place.

OWEN WILLANS RICHARDSON, M.A., D.Sc.,
Professor of Physics.
105 Fitz Randolph Road.

AUGUSTUS TROWBRIDGE, PH.D., Berlin,
Professor of Physics.
Hodge Road.

DUANE REED STUART, PH.D., Michigan,
Professor of Classics.
101 Broadmead.

CHRISTIAN GAUSS, A.M.,
Professor of Modern Languages.
106 Fitz Randolph Road.

EDWARD CAPPS, PH.D., LL.D.,
Professor of Classics.
150 Fitz Randolph Road.

EDWIN GRANT CONKLIN, PH.D., Sc.D.,
Professor of Biology.
139 Broadmead.

FRANK FROST ABBOTT, PH.D, Yale,
Kennedy Professor of Latin Language and Literature.
Fitz Randolph Road.

HENRY JONES FORD,
Professor of Politics.
42 Cleveland Lane.

MALCOLM MACLAREN, E.E., A.M.,
Professor of Electrical Engineering.
16 Prospect Ave.

EDWIN PLIMPTON ADAMS, PH.D., Harvard,
Professor of Physics.
12 Nassau St.

LUTHER PFAHLER EISENHART, PH.D., Johns Hopkins,
Professor of Mathematics.
22 Alexander St.

EDWARD ELLIOTT, PH.D., Heidelberg,
Professor of Politics.
Absent on leave.

GEORGE AUGUSTUS HULETT, PH.D., Leipsic,
Professor of Physical Chemistry.
Absent on leave.

RUDOLPH ERNEST BRÜNNOW, PH.D., Strassburg.
Professor of Semitic Philology.
"Edgehill", Stockton St.

WILLIAM FOSTER, PH.D., Princeton,
Professor of Chemistry.
41 Morningside Ave.

ROGER BRUCE CASH JOHNSON, PH.D., Princeton,
Professor of Philosophy.
129 Broadmead

ROBERT McNUTT McELROY, PH.D., Princeton,
Edwards Professor of American History.
86 Stockton St.

FRANK JEWETT MATHER, JR., PH.D., Johns Hopkins,
Marquand Professor of Art and Archaeology.
342 Nassau St.

OSWALD VEBLEN, PH.D., Chicago,
Professor of Mathematics.
Morningside Ave.

EDWARD SAMUEL CORWIN, PH.D., Pennsylvania,
Professor of Politics.
115 Prospect Ave.

HARRY FRANKLIN COVINGTON, A.M.,
Professor of Public Speaking and Debate.
34 Edgehill St.

ULRIC DAHLGREN, M.S.,
Professor of Biology.
204 Guyot Hall.

FRANK ALBERT FETTER, PH.D., LL.D.,
Professor of Political Economy.
121 Broadmead.

WILLIAM GILLESPIE, PH.D., Chicago,
Professor of Mathematics.
78 Alexander St.

DAVID MAGIE, JR., PH.D., Halle,
Professor of Classics.
34 Cleveland Lane.

JOSEPH EDWARD RAYCROFT, A.B., M.D.,
Professor of Hygiene and Physical Education.
Director of the Department of Physical Education.
120 Broadmead.

HENRY NORRIS RUSSELL, PH.D., Princeton,
Professor of Astronomy.
Director of the Observatory.
79 Alexander St.

JOHN DUNCAN SPAETH, PH.D., Leipsic,
Professor of English.
32 Edgehill St.

DOUGLAS LABAREE BUFFUM, PH.D., Johns Hopkins,
Professor of Romanic Languages and Literature.
117 Alexander St.

VARNUM LANSING COLLINS, A.M.,
CLERK OF THE FACULTY,
Professor of the French Language and Literature.
Editor of the General Biographical Catalogue.
214 The Western Way.

JOHN PRESTON HOSKINS, PH.D., Berlin,
Professor of Germanic Languages and Literature.
Absent on leave.

MAX FRIEDRICH BLAU, PH.D., Leipsic,
Professor of Germanic Languages and Literature.
27 Bank St.

GEORGE MADISON PRIEST, PH.D., Jena,
Professor of Germanic Languages and Literature.
10 Nassau St.

EDWIN WALTER KEMMERER, PH.D., Cornell,
Professor of Economics and Finance.
120 Fitz Randolph Road.

GEORGE BRINTON McCLELLAN, A.M., L.L.D.,
Professor of Economic History.
The Water Tower.

WILLIAM FRANKLIN WILLOUGHBY, A.B.,
McCormick Professor of Jurisprudence and Politics.
118 Library Place.

ARCHIBALD ALLAN BOWMAN, M.A., Glasgow,
Professor of Logic.
272 Nassau St.

CLAUDE SILBERT HUDSON, PH.D., Princeton,
Acting Professor of Physical Chemistry.
31 Bank St.

LUCIUS HOPKINS MILLER, A.M.,
Assistant Professor of Biblical Instruction.
13 Chambers St.

EDWARD GLEASON SPAULDING, PH.D., Bonn,
Assistant Professor,
Earl Dodge Preceptor in Philosophy.
82 Patton Hall.

ROYAL MEEKER, PH.D., Columbia,
Assistant Professor of Political Economy.
61 Wiggins St.

HENRY ROBINSON SHIPMAN, PH.D., Harvard,
Assistant Professor, Preceptor in History, Politics, and Economics.
27 Mercer St.

CHARLES WORTHEN SPENCER, PH.D., Columbia,
Assistant Professor, Preceptor in History, Politics, and Economics.
114 Fitz Randolph Road.

JOHN WILLIAM BASORE, PH.D., Johns Hopkins,
Assistant Professor, Preceptor in Classics.
15 North Albert B. Dod Hall.

FRED LEROY HUTSON, PH.D., Chicago,
Assistant Professor,
William Alfred Packard Preceptor in Classics.
The Bachelors.

GORDON HALL GEROULD, B.LITT., Oxon.,
Assistant Professor,
John Rutherfurd Preceptor in English.
341 Nassau St.

NATHANIEL EDWARD GRIFFIN, PH.D., Johns Hopkins,
Assistant Professor, Preceptor in English.
14 North Albert B. Dod Hall.

AUGUSTUS WHITE LONG, A.M.,
Assistant Professor, Preceptor in English.
29 Cleveland Lane.

FRANCIS CHARLES MACDONALD, A.B.,
Assistant Professor,
Edgerstoune Preceptor in English.
12 Nassau St.

CHARLES GROSVENOR OSGOOD, PH.D., Yale,
Assistant Professor, Preceptor in English.
72 Stockton St.

ROBERT KILBURN ROOT, PH.D., Yale,
Assistant Professor, Preceptor in English.
6 A Holder Hall.

JACOB NEWTON BEAM, PH.D., Jena,
Assistant Professor, Preceptor in Modern Languages.
52 Bayard Lane.

FRANK LINLEY CRITCHLOW, PH.D., Johns Hopkins,
Assistant Professor, Preceptor in Modern Languages.
132 Mercer St.

WILLIAM KOREN, A.M.,
Assistant Professor, Preceptor in Modern Languages.
94 Bayard Lane.

HARVEY WATERMAN THAYER, PH.D., Columbia,
Assistant Professor, Preceptor in Modern Languages.
10 Nassau St.

MARCUS STULTS FARR, D.Sc., Princeton,
Assistant Professor, Preceptor in Geology
20 VanDeventer Ave.

WALTER MAXWELL ADRIANCE, A.M.,
Assistant Professor, Preceptor in History, Politics, and Economics.
Princeton-Lawrenceville Road (R. F. D. 2).

MORRIS WILLIAM CROLL, PH.D., Pennsylvania,
Assistant Professor, Preceptor in English.
6 North Reunion Hall.

LOUIS WARDLAW MILES, PH.D., Johns Hopkins,
Assistant Professor, Preceptor in English.
Greenholm.

CHARLES RUFUS MOREY, A.M.,
Assistant Professor, Preceptor in Art and Archaeology.
Thomson Hall.

WILLIAM STARR MYERS, PH.D., Johns Hopkins,
Assistant Professor, Robert Stockton Pyne Preceptor in History, Politics, and Economics.
15 Alexander St.

HEREWARD LESTER COOKE, M.A.,
Assistant Professor of Physics.
104 Mercer St.

PHILIP ELY ROBINSON, PH.D., Giessen,
Assistant Professor of Physics.
128 Broadmead.

AUSTIN MORRIS HARMON, PH.D., Yale,
Assistant Professor, Preceptor in Classics.
111 Fitz Randolph Road.

RÉGIS MICHAUD, Licencié ès lettres, Sorbonne, Paris,
Assistant Professor, Preceptor in Modern Languages.
52 University Place.

HARRY CLEMONS, A.M.,
Reference Librarian.
4 East Witherspoon Hall.

RAYMOND SMITH DUGAN, PH.D., Heidelberg,
Assistant Professor of Astronomy.
20 Murray Place.

JOHN GALE HUN, PH.D., Johns Hopkins,
Assistant Professor, Preceptor in Mathematics.
150 Mercer St.

CHARLES RANALD MACINNES, PH.D., Johns Hopkins,
Assistant Professor, Preceptor in Mathematics.
14 VanDeventer Ave.

GILBERT VAN INGEN,
Assistant Professor of Geology.
Curator of Invertebrate Palaeontology.
115 Broadmead.

PHILIP HOWARD FOGEL, PH.D., Princeton,
Assistant Professor, Preceptor in Philosophy.
8 South West College.

ELIJAH SWIFT, PH.D., Göttingen,
Assistant Professor, Preceptor in Mathematics.
80 Murray Place.

JOSEPH HENRY MACLAGAN WEDDERBURN, D.Sc.,
Edinburgh.
Assistant Professor, Preceptor in Mathematics.
95 Mercer St.

GEORGE WASHINGTON TAPLEY WHITNEY, PH.D., Cornell,
Assistant Professor, Preceptor in Philosophy.
27 William St.

CHARLES WILLIAM KENNEDY, PH.D., Princeton,
Assistant Professor,
Robert Stockton Pyne Preceptor in English.
The Peacock Inn.

DAVID ALOYSIUS McCABE, PH.D., Johns Hopkins,
Assistant Professor, Preceptor in History, Politics, and Economics.
25 Patton Hall.

EDWIN FITCH NORTHRUP, PH.D., Johns Hopkins,
Assistant Professor of Physics.
30 Wiggins St.

ERNEST ASHTON SMITH, PH.D., Johns Hopkins,
Assistant Professor, Preceptor in History, Politics, and Economics.
8 East Brown Hall.

HARRY BROWN VAN DEVENTER, PH.D., Yale,
Assistant Professor, Preceptor in Classics.
12 Nassau St.

GEORGE WICKER ELDERKIN, PH.D., Johns Hopkins,
Assistant Professor, Preceptor in Art and Archaeology.
Nassau Club.

WILLIAM SHERWOOD FOX, PH.D., Johns Hopkins,
Assistant Professor, Preceptor in Classics.
70 University Place.

CHARLES EUGLEY MATHEWS, PH.D., John Hopkins,
Assistant Professor, Preceptor in Modern Languages.
34 Blair Hall.

DONALD PRITCHARD SMITH, PH.D., Göttingen,
Assistant Professor of Chemistry.
Peacock Inn.

DONALD CLIVE STUART, PH.D., Columbia,
Assistant Professor, Preceptor in Modern Languages.
The Western Way.

JOHN STOUT VAN NEST, PH.D., Munich,
Assistant Professor of Chemistry.
37 Cleveland Lane.

HAROLD HERMAN BENDER, PH.D., Johns Hopkins,
Assistant Professor, Preceptor in Modern Languages.
23 Bank St.

EDWIN FAUVER, A.B., M.D.,
Assistant Professor of Hygiene and Physical Education.
158 Mercer St.

RADCLIFFE HEERMANCE, A.M.,
Assistant Professor, Preceptor in English.
58 University Place.

ALLAN CHESTER JOHNSON, PH.D., Johns Hopkins,
Assistant Professor, Preceptor in Classics.
34 Bank St.

FREDERICK WILLIAM LUEHRING, PH.M.,
Assistant Professor of Hygiene and Physical Education.
66 Wiggins St.

HENRY CLAY McCOMAS, JR., PH.D., Harvard,
Assistant Professor, Preceptor in Psychology.
109 Broadmead.

CLARENCE WARD, A.M.,
Lecturer on Architecture.
39 Lincoln Ave., New Brunswick, N. J.

STEWART PATON, M.D.,
Lecturer on Biology.
Princeton, N. J.

EDWARD CHARLES McWILLIAMS, B.S.,
Instructor in Graphics.
60 Wiggins St.

CHARLES FREDERICK SILVESTER,
Curator of the Zoological Museum,
Assistant in Anatomy.
200 Nassau Hall.

WILLIAM JOHN SINCLAIR, PH.D., California,
Instructor in Geology,
Curator of Vertebrate Palaeontology.
30 Mercer St.

GEORGE DOBBIN BROWN, PH.D., Johns Hopkins,
Assistant Reference Librarian.
1 South West Brown Hall.

HERBERT SPENCER MURCH, PH.D., Yale,
Instructor in English.
1 A, Campbell Hall.

EDGEWORTH BIRD BAXTER, A.B.,
Instructor in Philosophy.
6 North East Brown Hall.

LOUIS SERLE DEDERICK, PH.D., Harvard,
Instructor in Mathematics.
23 William St.

CHARLES CHRISTOPHER MIEROW, PH.D., Princeton,
Instructor in Classics.
14 Bank St.

JOHN WENTWORTH AYMAR, JR., C.E.,
Instructor in Graphics.
Lake Road (P. O. Box 222.)

EARNEST CARY, PH.D., Harvard,
Instructor in Classics.
15 South Albert B. Dod Hall.

LEWIS ROBINSON CARY, PH.D., Princeton.
Instructor in Biology.
36 Wiggins St.

CLIFTON RUMERY HALL, A.M.,
Instructor in History, Politics, and Economics.
16 South West College.

DONALD GRANT HERRING, A.B.,
Instructor in History, Politics, and Economics.
95 Library Place.

VERNON ANDREW SUYDAM, B.S.,
Instructor in Physics.
200 Nassau St.

THOMAS JEFFERSON WERTENBAKER, PH.D., Virginia,
Instructor in History, Politics, and Economics.
23 Madison St.

PERCY REEVES BICKFORD, C.E.,
Instructor in Civil Engineering.
30 Vandeventer Ave.

FREDERICK AUGUSTUS BRAUN, PH.D., Illinois,
Instructor in Modern Languages.
18 Bank St.

DONALD BLYTHE DURHAM, PH.D., Princeton,
Instructor in Classics.
72 University Place.

EDWIN WILLIAM FRIEND, A.M.,
Instructor in Classics.
12 North West College.

EDMUND NEWTON HARVEY, PH.D., Columbia,
Instructor in Physiology.
15 South Albert B. Dod Hall.

FRANK ABBOTT MAGRUDER, PH.D., Johns Hopkins,
Instructor in History, Politics, and Economics.
24 Madison St.

THOMAS ADDIS EMMET MOSELEY, A.B.,
Instructor in Modern Languages.
5 North Reunion Hall.

ALBERT GRAHAM REID, B.A., (Oxon.),
Instructor in History, Politics, and Economics.
30 Jefferson Road.

RICHARD SCHELLENS,
Instructor in History, Politics, and Economics.
Nassau Club.

ROBERT MAXWELL SCOON, B.A., (Oxon.),
Instructor in Classics.
6 Madison St.

EDWARD ADDISON STEVENS, B.S.,
Instructor in Physics.
45 University Place.

JAMES EDWARD WINSTON, A.M.,
Instructor in History, Politics, and Economics.
42 Mercer St.

JAMES WADDELL ALEXANDER, II, A.M.,
Instructor in Mathematics.
24 Madison St.

JOHN RENSHAW CARSON, E.E., M.S.,
Instructor in Electrical Engineering and Physics.
199 Nassau St.

LINDLEY RICHARD DEAN, A.M.,
Instructor in Classics.
15 Bank St.

PERCY NOYES EDWARDS, C.E.,
Instructor in Geodesy.
Elm Club.

RAY EDWIN GILMAN, A.B.,
Instructor in Mathematics.
23 Madison St.

OSWALD WHITMAN KNAUTH, A.B.,
Instructor in History, Politics, and Economics.
24 Murray Place.

WILLIAM BURT MILLEN, B.A., (Oxon.),
Instructor in History, Politics, and Economics.
30 Jefferson Road.

JOHN GRIFFEN PENNYPACKER, C.E.,
Instructor in Civil Engineering.
12 South Edwards Hall.

CHARLES IRVING PLACE, C.E.,
Instructor in Geodesy.
11 Chambers St.

KEITH PRESTON, A.M.,
Instructor in Classics.
24 Bank St.

JOHN HOWARD REDFIELD, A.M.,
Instructor in Modern Languages.
27 William St.

THOMAS DeCOURSEY RUTH, A.B.,
Instructor in Classics.
8 North West College.

EDWARD STAPLES SMITH, M.E., M.S.,
Instructor in Mathematics.
11 Bank St.

KEITH KUENZI SMITH, A.B.,
Instructor in Physics.
47 Spring St.

CHARLES HURLBUT STERRETT, C.E.,
Instructor in Geodesy.
24 Campbell Hall.

CORTLANDT VAN WINKLE, A.M.,
Instructor in English.
10 Nassau St.

JOHN INSLEY BLAIR VAIL, B.S.,
Assistant in Chemistry.
11 South West College.

JULIAN KALFUS DALE, A.B.,
Assistant in Chemistry.
Cannon Club.

HERBERT LESLIE SAWYER, A.B.,
Assistant in Chemistry.
7 Park Place.

JULIAN HUNTLEY CAPPS, A.B.,
Assistant in Chemistry.
47 N. Tulane St.

NELSON CLARK DALE, A.M.,
Assistant in Geology.
6 Bank St.

ALBERT SHERMAN EASTMAN, M.S.,
Assistant in Chemistry.
26 Bank St.

BYRON CASSIUS GOSS, A.B.,
Assistant in Chemistry.
26 Bank St.

HARLEY NATHAN GOULD, A.B.,
Assistant in Biology.
4 East Brown Hall.

ALBERT EATON JENNINGS, JR., B.S.,
Assistant in Chemistry.
32 Wiggins St.

CARL WEAVER MITMAN, A.B., E.M.,
Assistant in Mineralogy.
36 Wiggins St.

HARRISON OAKS PARKER, A.B.,
Assistant in Chemistry.
18 Madison St.

PRENTICE REEVES, A.B.,
Assistant in Psychology.
18 Madison St.

ARTHUR ANDRÉ SWANSON, M.S.,
Assistant in Chemistry.
229 Nassau St.

EDWARD HOWLAND WARDWELL, B.S.,
Assistant in Biology.
19 Linden Lane.

THE STAFFORD LITTLE LECTURESHIP ON PUBLIC AFFAIRS

Founded by the Honorable Henry Stafford Little,
of the Class of 1844.

Lecturer:

THE HONORABLE ELIHU ROOT, LL.D.

THE LOUIS CLARK VANUXEM FOUNDATION

Established under the will of Louis Clark Vanuxem,
of the Class of 1879.

Lecturer:

PROFESSOR SENATOR VITO VOLTERRA,
D.PHYS., D.SC., D.PHIL., D.MATH.,
of the University of Rome, Italy

OFFICERS OF ADMINISTRATION

JOHN GRIER HIBBEN, PH.D., LL.D., LITT.D.,
President.
Nassau Hall.

ANDREW FLEMING WEST, PH.D., LL.D.,
HON. D.LITT. (OXON.),
Dean of the Graduate School.
Nassau Hall.

HENRY BURCHARD FINE, PH.D., LL.D.,
Dean of the Departments of Science.
Absent on leave.

WILLIAM FRANCIS MAGIE, PH.D.,
Dean of the Faculty.
The Dean's House.

HOWARD McCLENAHAN, E.E., M.S., LL.D.,
Dean of the College.
Nassau Hall.

HENRY GREEN DUFFIELD, A.B.,
Treasurer.
University Offices.

CHARLES WILLISTON McALPIN, A.M.,
Secretary.
Nassau Hall.

GEORGE CLARENCE WINTRINGER, E.E.,
Secretary of Business Administration.
University Offices.

CHARLES HODGE JONES, A.B.,
Registrar.
Nassau Hall.

GILBERT FAIRCHILD CLOSE, A.M.,
Editor of Official Publications,
Assistant to the Secretary.
Nassau Hall.

JOHN SAVILLE COSGRAVE,
Assistant to the Treasurer.
University Offices.

ROSWELL DAVIS, B.S.,
Superintendent of Grounds and Buildings.
University Offices.

JOHN McDOWELL CARNOCHAN, M.D.,
University Physician.
The Infirmary.

BESSIE LOUISE DICKSON,
Infirmarian.
The Infirmary.

WILLIAM JAMES COAN,
Proctor.
Nassau Hall.

STANDING COMMITTEES OF THE FACULTY

Clerk of the University Faculty—PROFESSOR V. L. COLLINS.

Course of Study—PRESIDENT HIBBEN, Chairman; PROFESSORS CAPPS, COLLINS, CONKLIN, FETTER, HARPER, MCELROY, W. F. MAGIE, NEHER, THOMPSON (Secretary), WEST.

Discipline—DEAN MCCLENAHAN, Chairman; PROFESSORS MCELROY, OSGOOD, PHILLIPS, PRIEST, TROWBRIDGE.

Entrance—PROFESSOR *HOSKINS, Chairman; PROFESSOR D. R. STUART, Acting Chairman; PROFESSORS COOKE, FOSTER, GILLESPIE, ROOT, (Secretary), WARREN.

Library—DR. E. C. RICHARDSON, Chairman; PROFESSORS ADAMS, FORD, GAUSS, HARPER, MCCAY, MCCLURE, DAVID MAGIE, MATHER, KEMP SMITH, SMYTH, VEBLEN.

Music—PROFESSOR GILLESPIE, Chairman; PROFESSORS BUTLER, COOKE, FOGEL, MARQUAND.

Non-Athletic Organizations—PROFESSOR AXSON, Chairman; PROFESSORS FORD, GEROULD, DAVID MAGIE, RANKIN, D. C. STUART (Secretary), PAUL VAN DYKE.

Examinations and Standing—DEAN MAGIE, Chairman; PROFESSORS EISENHART, JOHNSON, MCCLENAHAN, MACINNES, PHILLIPS, VREELAND, WESTCOTT.

Graduate School—DEAN WEST, Chairman; PROFESSORS ABBOTT, CONKLIN, EISENHART (Secretary), FETTER, W. F. MAGIE, MARQUAND, NEHER, PARROTT, KEMP SMITH, SMYTH, VREELAND, BUTLER.

Schedules—PROFESSOR THOMPSON, Chairman; REGISTRAR C. H. JONES.

Teachers and Schools—PROFESSOR COLLINS, Chairman, PROFESSORS MCCOMAS, MEEKER, PRENTICE, SPAETH.

Out-Door Sports—PROFESSOR SCOTT, Chairman; PROFESSORS KENNEDY, MCCLENAHAN (Secretary), MCCLURE, RAYCROFT.

Public Lectures—PROFESSOR MCCLELLAN, Chairman; PROFESSORS MARQUAND, TROWBRIDGE, HENRY VAN DYKE.

COMMITTEE ON SANITATION

(*Advisory to the Trustees Committee on Grounds and Buildings.*) PROFESSOR CONKLIN, Chairman; DR. FINNEY, DR. PATON, PROFESSOR LOOMIS, PROFESSOR RAYCROFT, MR. WINTRINGER, Secretary.

For the office hours of the various standing committees, see page 8.
*Absent on leave.

PART II

HISTORY AND GOVERNMENT OF THE UNIVERSITY

HISTORY AND GOVERNMENT OF THE UNIVERSITY

At the beginning of the eighteenth century there were but three institutions of higher learning in the colonies: Harvard and Yale in New England and the College of William and Mary in Virginia.

In 1739 a movement was set on foot by the Synod of Philadelphia to establish a college in the Middle Colonies and a committee was appointed to carry out the plan. But, the time not being propitious, the project was laid aside without any material progress. In the meantime the Log College, founded near the Forks of Neshaminy, Pennsylvania, by the Rev. William Tennent, Sr., a graduate of Edinburgh University, and a member of the Synod of Philadelphia, had been successfully conducted as a school for candidates for the ministry. Mr. Tennent died in 1746, and at this time the abandoned project of the erection of a college, to rank with Harvard, Yale, and William and Mary, was again taken up by its adherents, who had withdrawn from the Synod of Philadelphia and had formed the Synod of New York. The project was this time successfully carried out and a charter was granted to the applicants, passing the great seal of the Province of New Jersey on October 22nd, 1746, attested by Acting Governor John Hamilton, of His Majesty's Council. The original trustees named in this instrument were Messrs. William Smith, Peter Van Brugh Livingston, and William Peartree Smith, and the Reverends Jonathan Dickinson, John Pierson, Ebenezer Pemberton, and Aaron Burr. By the terms of the charter

these seven trustees were empowered to choose five others to complete the Board; and, knowing the hearty favor with which the friends of the Log College viewed the movement, they elected the Reverends Gilbert Tennent, William Tennent, Jr., Samuel Blair, and Samuel Finley, graduates of the Log College, and Richard Treat, graduate of Yale College, to fill the vacancies.

The charter of 1746 is not of record, although a memorandum of its grant appears among the records of charters and commissions in the office of the Secretary of State at Trenton, New Jersey. Its substance is set forth in an advertisement which appeared in the *Pennsylvania Gazette* of August 13, 1747, which is as follows:

Philadelphia, August 13, 1746-7.

These are to give Notice to all concerned, That by His Majesty's Royal Charter for erecting a college in New Jersey, for the instructing of youth in the learned languages, and in the liberal arts and sciences, bearing date October 22d, 1746, Messrs. William Smith, Peter Vanbrugh Livingston, William Peartree Smith, gent. and Messrs. Jonathan Dickenson, John Pierson, Ebenezer Pemberton, and Aaron Burr, ministers of the gospel, are appointed trustees of the said college; with full power to any four or more of them, to chuse five more trustees to the exercise of equal power and authority in the said college, with themselves. By virtue of which power, the said trustees, nominated in the charter, have chosen the Rev. Messrs. Gilbert Tennant, William Tennant, Samuel Blair, Richard Treat, and Samuel Finley, as trustees of the said college of New-Jersey:

Which trustees are by the said charter, constituted a body corporate and politick, both in fact and name, with full power to act as such to all intents and Purposes, and rendred capable of a perpetual succession to continue forever. By which royal charter, there is authority given to the major part of any seven or more of the said trustees, and their successors conveen'd for that purpose, to purchase, receive, and dispose of any possessions, tenements, goods and chattels, gifts, legacies, donations and bequests, rents, profits and annuities of any kind whatsoever, and to build any house or houses, as they shall think proper, for the use of

the said college. And also by the said charter is given to the major part of any seven or more of the said trustees and their successors, full power to chuse, and at pleasure to displace, a president, tutors, professors, treasurer, clerk, steward, and usher, with any other ministers, and officers as are usual in any of the universities or colleges in the realm of Great Britain.

And also by the said charter is given to the major part of any seven of the said trustees and their successors, full power to make any laws, acts and ordinances, for the government of the said college, as are not repugnant to the laws and Statutes of the realm of Great Britain, nor to the Laws of the Province of New-Jersey; provided, that no person be debarred any of the priviliges of the said college on account of any speculative principles of religion; but those of every religious profession, having equal privilege and advantage of education in the said college. And also by the said charter, power is given to the major part of any seven of the said trustees and their successors, by their president, or any other appointed by them, to give any such degrees as are given in any of the universities or colleges in the realm of Great Britain, to any such as they shall judge qualified for such degrees; and power to have and use a common seal to seal and confirm diplomas or certificates of such degrees, or for any other use which they shall think proper.

And these may further notify all concern'd, that the said trustees have chosen the Rev. Mr. Jonathan Dickinson president, whose superior Abilities are well known; and Mr. Caleb Smith tutor of the said college; and that the college is now actually opened, to be kept at Elizabeth-Town, till a building can be erected in a more central place of the said province for the residence of the Students; that all who are qualified for it, may be immediately admitted to an academick education, and to such class and station in the college, as they are found upon examination to deserve; and that the charge of the college to each student, will be Four Pounds a year New-Jersey money, at Eight Shillings per ounce, and no more.

In the summer of 1747 Jonathan Belcher, Esq., the newly appointed Governor of New Jersey, arrived in the Colony, and at once manifested the deepest interest in the infant college. The original charter not being entirely satisfactory, Governor Belcher granted a second, which

passed the seal of the Province on September 14, 1748. The text of the Second Charter is as follows:

CHARTER OF THE TRUSTEES OF THE COLLEGE OF NEW JERSEY

George the Second by the Grace of God of Great Britain France and Ireland King Defender of the Faith etc. TO ALL TO WHOM these presents shall come GREETING. WHEREAS sundry of our loving Subjects, well disposed and publick spirited Persons, have lately by their humble petition, presented to our trusty and well beloved Jonathan Belcher Esquire Governor and Commander in Chief of our province of New Jersey in America, represented the great Necessity of comeing into some Method for encouraging and promoting a learned Education of our Youth in New Jersey, and have expressed their earnest Desire that a College may be erected in our said province of New Jersey in America, for the Benefit of the Inhabitants of the said Province and others, wherein Youth may be instructed in the learned Languages, and in the liberal Arts and Sciences. AND WHEREAS by the fundamental Concessions made at the first Settlement of New Jersey by the Lord Berkeley and Sir George Carteret then proprietors thereof, and granted under their Hands and the seal of the Said Province, bearing Date the Tenth Day of February in the Year of our Lord one thousand six hundred and Sixty four, it was, among other things conceded and agreed that "no Freeman within the said Province of New Jersey should at any time be molested, punished, disquieted, or called in Question for any difference in Opinion or Practice in Matters of religious Government, who do not actually disturb the civil peace of the said province, but that all and every such Person or Persons might from time to time and at all times thereafter freely and fully have and enjoy his and their judgments and Consciences, in Matters of Religion throughout the said Province they behaveing themselves peaceable and quietly and not using this Liberty to Licentiousness, nor to the civil Injury or outward disturbance of others." As by the said Concessions on Record in the Secretary's Office of New Jersey at Perth Amboy in Lib. 3 Folio 66 &c, may appear. WHEREFORE, and for that the said Petitioners have also expressed their earnest Desire that those of every religious Denomination may have free and equal Liberty and Advantages of Edu-

cation in the said College, any different Sentiments in Religion notwithstanding: WE being, willing to grant the reasonable Request and Prayers of all our loving Subjects and to promote a liberal and learned Education among them. KNOW YE THEREFORE THAT WE, considering the Premises, and being willing for the future that the best Means of Education be established in our said Province of New Jersey for the Benefit and Advantage of the Inhabitants of our said Province and others; DO, of our special Grace certain Knowledge and mere Motion, by these Presents will, ordain, grant and constitute, that there be a College erected in our said Province of New Jersey, for the Education of Youth in the learned Languages and in the liberal Arts and Sciences, and that the Trustees of the Said College and their Successors for ever may and shall be one Body Corporate and politick in Deed Action and Name, and Shall be called and named, and distinguished by the Name of THE TRUSTEES OF THE COLLEGE OF NEW JERSEY. AND further, wee have willed given granted constituted and appointed, And this by our present CHARTER of our special Grace, certain Knowledge and mere Motion, WE DO, for us our Heirs and Successors, will, give, grant, constitute and ordain that there shall in the said College from henceforth for ever be a Body politick, consisting of Trustees of the said College of New Jersey. AND, for the more full and perfect Erection of the said Corporation and Body Politick consisting of Trustees of the College of New Jersey WE of our especial Grace, certain Knowledge and mere Motion, DO by these presents for us our Heirs and Successors create, make, ordain, constitute nominate, and appoint the Governor, and Commander in Chief of our said Province of New Jersey for the Time being, and also our trusty and well beloved John Reading, James Hude, Andrew Johnston, Thomas Leonard, John Kinsey, Edward Shippen, and William Smith Esquires, Peter Van Brugh Livingston, William Peartree Smith and Samuel Hazard Gentlemen, John Pierson, Ebenezer Pemberton, Joseph Lamb, Gilbert Tennent, William Tennent, Richard Treat, Samuel Blair, David Cowel, Aaron Burr, Timothy Jones, Thomas Arthur, Jacob Green, Ministers of the Gospel, to be Trustees of the said College of New Jersey. [Repealed clause relative to oaths omitted.] THAT no Meeting of the Trustees Shall be Valid or legal for doing any Business whatsoever unless the Clerk has duly and legally notified each and every Member of the Corporation, of such Meeting, and that before the entering on

any Business the Clerk shall certify such Notification under his Hand to the Board of Trustees. THAT the said Trustees have full Power and Authority, or any thirteen [number changed] or greater Number of them, to elect, nominate and appoint, and associate unto them any Number of Persons as Trustees, upon any Vacancy, so that the whole number of the Trustees exceed not twenty-three [altered to twenty-seven], whereof the president of the said College for the Time being to be chosen as hereafter mentioned, to be one, and twelve of the Said Trustees to be always Such persons as are Inhabitants of our said Province of New Jersey. AND WE DO FURTHER of our especial Grace, certain Knowledge, and mere Motion, for us our Heirs and Successors, will, give grant, and appoint, that the said Trustees and their Successors shall for ever here after be, in Deed, Fact, and Name a Body Corporate and Politick, and that they the said Body Corporate and Politick Shall be known and distinguished in all Deeds, Grants, Bargains, Sales, Writings, Evidences, Muniments, or otherwise howsoever, and, in all Courts for ever hereafter, plead and be impleaded by the Name of the Trustees of the College of New Jersey. AND that they the said Corporation, by the Name aforesaid, Shall be able, and in Law capable, for the use of the said College to have, get, acquire, purchase, receive, and possess Lands, Tenements, Hereditaments, Jurisdictions and Franchises for themselves, and their Successors, in Fee Simple or otherwise howsoever; AND to purchase, receive or build any House or Houses, or any Other Buildings as they Shall think needfull or convenient for the Use of the Said College of New Jersey, and in such Place or places in New Jersey, as they the said Trustees shall agree upon. AND also to receive and dispose of any Goods, Chattles and other things of what Nature soever for the Use aforesaid, and receive any Rents, Profits, Annuities, Gifts, Legacies, Donations, and Bequests of any kind whatsoever for the Use aforesaid, so nevertheless the yearly clear Value of the Premises do not exceed the sum of two thousand Pounds Sterling [amount changed]. AND therewith or otherwise to support and pay (as the said Trustees and their Successors or the major Part of such of them as (according to the Provision herein afterwards) are regularly convened for that purpose shall agree and see Cause) the President, Tutors, and other Officers or Minister of the said College, their respective annual Salaries or Allowance and all such other necessary and contingent Charges as from time to time Shall arise and accrue relating to the said college. AND also to grant, bargain,

Sell, let, set, or assign, Lands Tenements, or Hereditaments Goods or Chattles, contract or do all other things whatsoever, by the Name aforesaid and for the Use aforesaid, in as full and ample Manner to all Intents and Purposes, as any natural Person or other Body Politick or Corporate is able to do, by the Laws of our Realm of Great Britain or of our said Province of New Jersey. AND OF OUR FURTHER Grace, certain Knowledge, and meer Motion, to the Intent that our said Corporation and Body Politick may answer the end of their Erection and Constitution, and may have perpetual Succession and continue for ever. We do for us our Heirs and Successors hereby will, give, and grant unto the said Trustees of the College of New Jersey, and to their Successors for ever, that when Any thirteen [number changed, and so below wherever thirteen stands] of the said Trustees or of their Successors are convened and met together as aforesaid for the Service of the said College, the Governor and Commander in Chief of our said Province of New Jersey, and in his Absence the President of the said College, and in the absence of the said Governor and President, the eldest Trustee present at such Meeting, from time to time, Shall be president of the said Trustees at all their Meetings, and at any time or times such thirteen Trustees convened and met as aforesaid Shall be capable to act as fully and amply to all Intents and Purposes, as if all the Trustees of the said College were personally present. PROVIDED always that a Majority of the said thirteen Trustees be of the said Province of New Jersey, except, after regular Notice they fail of coming, in which Case those that are present are hereby impowered to act, the different place of their Abode notwithstanding, and all affairs and Actions whatsoever under the Care of the said Trustees shall be determined by the Majority or greater Number of those thirteen so convened and met together, the President whereof shall have no more than a single vote. AND WE DO for us our Heirs and Successors hereby will, give and grant full Power and Authority to any six or more of the said Trustees to call Meetings of the said Trustees from time to time and to order Notice to the said Trustees of the Times and Places of Meeting for the Service aforesaid. AND ALSO WE DO hereby for us our Heirs and Successors, will, give, and grant to the said Trustees of the College of New Jersey, and to their Successors for ever, that the Said Trustees, do elect nominate, and appoint such a qualified Person as they or a major Part of any thirteen of them, convened for that purpose as above directed, Shall think fit, to be the

President of the said College, and to have the immediate Care of the Education and Government of such Students as shall be sent to, and admitted into the said College for Instruction and Education. AND ALSO that the said Trustees do elect nominate and appoint so many Tutors and Professors to assist the President of the said College, in the Education and Government of the Students belonging to it, as they the said Trustees or their Successors or the major part of any thirteen of them, which shall convene for that purpose as above directed, Shall from time to time and at any time hereafter think needful and serviceable to the Interests of the said College.

AND ALSO THAT THE SAID TRUSTEES AND THEIR SUCCESSORS, or the major Part of any thirteen of them, which shall convene for that purpose as above directed, Shall at any time displace and discharge from the Service of the said College, such President Tutors and Professors, and to elect others in their Room and Stead AND ALSO that the said Trustees or their Successors, or the major Part of any thirteen of them which Shall convene for that Purpose as above directed, do from time to time as occasion Shall require, elect, constitute and appoint a Treasurer, a Clerk, an Usher, and a Steward for the said College, and appoint to them and each of them their respective Business and Trusts, and displace and discharge, from the Service of said College, such Treasurer, Clerk, Usher, or Steward, and to elect others in their Room and Stead, which President, Tutors, Professors, Treasurer, Clerk, Usher, and Steward, so elected and appointed, WE DO for us our Heirs and Successors, by these Presents constitute and establish in their several Offices, and do give them and every one of them full Power and Authority to exercise the same in the said College of New Jersey, according to the Direction and during the Pleasure of the said Trustees, as fully and freely as any other the like Officers in our Universities or any of our Colleges in our Realm of Great Britain lawfully may and ought to do. AND ALSO that the said Trustees and their Successors or the major Part of any thirteen of them, which shall convene for that Purpose as above directed, as often as one or more of the said Trustees Shall happen to dye, or by removal or Otherwise Shall become unfit or uncapable according to their Judgment to serve the Interest of the said College, do, as soon as conveniently may be after the Death, Removal, or such Unfitness or Incapacity of such Trustee or Trustees to serve the Interest of the said College, elect and appoint such other Trustee or Trustees as shall supply the place of him or them so dying, or Otherwise

becoming unfit or uncapable to serve the Interest of the said College; and every Trustee so elected and appointed, Shall by Vertue of these presents and of such Election and Appointment be vested with all the Power and Privileges which any of the other Trustees of the said College are hereby invested with, AND WE DO FURTHER of our especial Grace, certain Knowledge and meer Motion, will, give, and grant, and by these Presents do, for us our Heirs and Successors, will, give, and grant, unto the said Trustees of the College of New Jersey, that they and their Successors, or the major Part of any thirteen of them, which Shall convene for that Purpose, as above directed, may make, and they are hereby fully impowered from Time to Time, freely and lawfully to make and establish such Ordinances, Orders, and Laws, as may tend to the good and wholesome Government of the said College, and all the Students and the several officers and Ministers thereof, and to the public Benefit of the same, not repugnant to the Laws and Statutes of our Realm of Great Britain or of this our Province of New Jersey, and not excluding any Person of any religious Denomination, whatsoever from free and equal Liberty and Advantage of Education, or from any of the Liberties Privileges or Immunities of the said College on Account of his or their being of a religious profession different from the said Trustees of the said College, and Such Ordinances, Orders, and Laws, which Shall be so as aforesaid made, WE DO by these Presents for us our Heirs and Successors ratify, allow of, and confirm as good and effectual to oblige and bind all the said Students, and the several Officers and Ministers of the said College, AND WE DO hereby authorize and impower the said Trustees of the College, and the President, Tutors and Professors by them elected and appointed to put such Ordinances and Laws in Execution to all Proper Intents and Purposes. AND WE DO FURTHER of our especial Grace, certain Knowledge, and meer Motion, will, give, and grant, unto the said Trustees of the College of New Jersey that for the Encouragement of Learning and animating the Students of the said College to Diligence Industry and a laudable Progress in Literature, that they and their Successors, or the major Part of any thirteen of them convened for the Purpose as above directed, do, by the President of the said College for the time being or by any other deputed by them give and grant any such Degree and Degrees to any of the Students of the said College, or to any others by them thought worthy therof as are usually granted in either of our Universities or any other College in our Realm of Great Britain,

and that they do sign and seal Diplomas or Certificates of such Graduations to be kept by the Graduates as Perpetual Memorials or Testimonials thereof. AND FURTHER of our especial Grace, certain Knowledge, and meer Motion, WE DO by these Presents for us our Heirs and Successors give and grant unto the Said Trustees of the College of New Jersey and to their Successors, that they and their Successors Shall have a common Seal under which they may pass all Diplomas and Certificates of Degrees, and all other the Affairs and Business of and concerning the said Corporation, or of and concerning the said College of New Jersey, which shall be engraven in Such Form and with such Inscription as Shall be devised by the said Trustees of the said College, or the major Part of any thirteen of them, convened for the Service of the said College as above directed. AND WE DO FURTHER for us our Heirs and Successors give and grant unto the said Trustees of the College of New Jersey and their Successors, or the major Part of any thirteen of them, convened for the Service of the College as above directed, full Power and Authority from time to time to nominate and appoint all other inferior Officers and Ministers which they shall think to be convenient and necessary for the Use of the College, not herein particularly named, or mentioned, and which are accustomary in our Universities, or in any of our Colleges in our Realm of Great Britain, which Officers or Ministers we do hereby impower to execute their Offices or Trusts as fully and freely as any other the like officers or Ministers in any of our Universities, or any other College in our Realm of Great Britain lawfully may or ought to do.

AND LASTLY our express Will and Pleasure is, and we do by these Presents for us our Heirs and Successors, give and grant unto the said Trustees of the College of New Jersey, and to their Successors forever, that these our Letters Patent or the Enrollment thereof shall be good and effectual in the Law to all Intents and Purposes, against us our Heirs and Successors, without any other License, Grant or Confirmation, from us our Heirs and Successors hereafter by the said Trustees to be had or obtained; Notwithstanding the not reciting or Misrecital, or not naming or mis-naming of the aforesaid Offices, Franchises, Privileges, Immunities, or other the Premises or any of them, and notwithstanding a Writ of Ad quod Damnum hath not issued forth to enquire of the premises or any of them, before the ensealing hereof; Any Statute, Act, Ordinance or Provision, or any

other Matter or thing to the contrary notwithstanding. TO have hold and enjoy all the singular the Privileges, Advantages, Liberties, Immunities, and all other the Premises herein and hereby granted and given or which are meant mentioned or intended to be herein and hereby given and granted unto them the said Trustees of the said College of New Jersey and to their Successors forever. IN TESTIMONY whereof We have caused these our Letters to be made Patent, and the Great Seal of our said Province of New Jersey to be hereunto affixed. WITNESS our trusty and well beloved JONATHAN BELCHER Esquire Governor and Commander in Chief of our said Province of New Jersey this fourteenth day of September in the twenty second Year of our Reign, and in the Year of our Lord one thousand seven hundred and forty eight.

I have perused and Considered the within Charter of Incorporation, and find nothing Contained therein Inconsistent with his Majesty's Interest or the Honor of the Crown.

J. WARRELL, *At Genll.*

September ye 13th. 1748.—This charter having been read in Council was consented to and approved of.

CHA. READ, *Cl. Con.*

Lett the Great Seal of the Province of New Jersey be Affixed to this Charter.

J. BELCHER.

To the Secretary of the Province of New Jersey.

This second charter had been sought by the original trustees in order to increase their number, to give other religious communions a share in the administration, and to make the lay trustees equal in number to those who were clergymen. Numerous doubts, besides, had been expressed as to the validity of the first charter, which had been granted, by the President of the Council, then acting as governor, and which had never been recorded *verbatim* in the records of the Secretary of State. The interest taken by Governor Belcher in the affairs of the institution and the wise forethought of its founders, by the execution of the second and more comprehensive document, effectually removed all doubts as to the validity of their powers.

After the Revolution this charter was confirmed and renewed by the Legislature of the State of New Jersey.

Upon the granting of the first charter measures had at once been taken to open the College, and on February 2, 1747, a notice appeared in the *New York Gazette Revived in the Weekly Post Boy,* notifying "any Person or Persons who are qualified by preparatory Learning for Admission, that some time in May next at latest they may be there admitted to an Academic Education." On the 20th of April, the following notice was given through the same journal:

> This is to inform the Publick, That the Trustees of the College of New-Jersey, have appointed the Reverend Mr. Jonathan Dickinson, President of the said College; which will be opened the fourth week in May next, at Elizabeth-Town: At which Time and Place, all Persons suitably qualified, may be admitted to an Academic Education.

Hatfield, in his *History of Elizabeth,* states that "the first term of the College of New Jersey was opened at Mr. Dickinson's house, on the south side of the old Rahway road, directly west of Race street." President Dickinson's term of administration was brief, commencing in April, 1747, and closing with his death on October 7, 1747. Upon his decease the Rev. Aaron Burr assumed charge of the College, which was removed from Elizabethtown to Newark. To Mr. Burr belongs the credit for the organization of the curriculum, the ceremonies of the College, and its discipline.

The first Commencement was held at Newark, November 9, 1748, and was celebrated with much ceremony. The *New York Gazette Revived in the Weekly Post Boy* published an account of the proceedings of this Commencement in detail, together with the inaugural address of President Burr, in which address he emphasized broad and

liberal education as the firmest foundation of the Commonwealth, and concluded with a eulogy of the generosity of their patron, Governor Belcher. The graduating class numbered six.

A set of laws for the government of the College, probably prepared by Burr, were adopted by the Trustees at this time. One, relating to the admission of students, gives a fair idea of the entrance requirements of the period:

> 1. None may be expected to be admitted into College but such as being examined by the President and Tutors shall be found able to render Virgil and Tully's Orations into English; and to turn English into true and grammatical Latin; and to be so well acquainted with the Greek as to render any part of the four Evangelists in that language into Latin or English; and to give the grammatical connection of the words.

The Trustees also announced "That the annual Commencement for the future be on the last Wednesday of September, and that the next Commencement be held at New Brunswick."

The need of funds being urgent, application was made to the Provincial Assembly for authority to raise by a lottery a sum not exceeding eight thousand dollars; but the request was denied and the lottery was transferred to Philadelphia. Several years later, in 1761-2, the Assembly granted this privilege, as did also the General Court of Connecticut (1753-4).

In casting about for a desirable site for the location of the Institution, the situation of Princeton at once commended itself. Not only was it midway between the cities of New York and Philadelphia and its one street a part of the great highway between them, but it occupied a central position upon rising ground, insuring healthful surroundings, on the line dividing East and West Jersey. New Brunswick, because of its greater size and somewhat similar though not so favorable location, claimed the first consider-

ation; but the Trustees, well aware of the pecuniary value of a college to any town in which it should be placed, were desirous of securing the full advantage accruing from this fact, and voted, September 26, 1750:

That a proposal Be made to the Towns of Brunswick and Prince-Town to try what Sum of Money They can Raise for Building of the College by the next meeting that the trustees may Be Better able to Judge in Which of these places to fix the place of the College.

At the next meeting of the Board, held in Trenton, May 15, 1751, the following resolution was adopted:

Voted that New Brunswick be ye Place for the Building of the College, provided the Inhabitants of sd. Place agree with the Trustees upon the following Terms, Viz. that they secure to the College a Thousand Pounds proc. Money, ten acres of land contiguous to the College, and two hundred acres of Wood Land, the furthest Part of it not to be more than three Miles distant from the Town; or such a Quantity of Wood Land as the Trustees of the College shall judge Equivalent to two hundred Acres of Wood Land offered to be given by some gentleman in Prince Town.

Mr. Jonathan Sergeant, the Treasurer, was ordered to view the land at Princeton and New Brunswick and report to the Board. The citizens of the latter place do not appear to have been eager to accept the terms imposed by the Board, and, failing to comply by the time allowed, it was voted, September 27, 1752:

That the College be fixed at Princeton upon Condition that the Inhabitants of sd. Place secure to the Trustees that two Hundred Acres of Woodland, and that ten Acres of clear'd Land which Mr. Sergeant view'd; and also one thousand Pounds proc. Money.

This action finally settled the question of location, and, the citizens of the town having complied with the terms proposed by the Board, steps were at once taken for the erection of the first college building. The plans drawn by Dr. Shippen and Robert Smith were accepted by the Trus-

tees. These, according to the minutes of July 22, 1754, specified "That the College be built of Brick if good Brick can be made at Princeton & if Sand can be got reasonably cheap. That it be three story high & without any Cellar;" but at a subsequent meeting it was decided that stone be used for the College edifice. The land for this building was given by Nathaniel Fitz Randolph, who also donated twenty pounds currency. Ground was broken on the 29th of July, 1754, under the direction of Joseph Morrow, and soon afterward the corner-stone was laid, in the presence of Thomas Leonard, John Stockton, John Horner, William Worth (stone mason), Nathaniel Fitz Randolph, and many others. It was the desire of the trustees to name the new building after the patron and benefactor of the College, Governor Belcher, but with rare modesty he declined the honor, requesting the Board to call the edifice "Nassau Hall," as expressing "the Honour we retain, in this remote Part of the Globe to the immortal Memory of the Glorious King William the 3d., who was a Branch of the illustrious House of NASSAU." This request was complied with in the following terms:

> Whereas his Excellency Govr. Belcher has signified to us, his declining to have the Edifice we have lately erected at Princeton for the Use and Service of New-Jersey College to be called after his Name, and has desired and for Good Reasons that it should be call'd after the Name of the illustrious House of NASSAU; It is therefore voted, and is hereby ordered that the sd. Edifice be in all Time to come called and be known by the Name of NASSAU HALL.

The College was completed and the students removed from Newark to Princeton in the fall of 1756. The expenses incurred consequent upon the erection of so considerable a building, then the largest structure of its kind in the colonies, had prompted the Board, in 1753, to send the Rev. Gilbert Tennent and the Rev. Samuel Davies to

Great Britain to solicit funds in behalf of the Institution. This undertaking was successful, and the money acquired sufficient to defray in part the cost of the building.

The death of President Burr occurred September 24, 1757, and three days later the trustees at their stated meeting elected the Rev. Jonathan Edwards, of Stockbridge, Massachusetts, to fill the vacancy.

President Edwards arrived at Princeton on the 16th of February, 1758, and assumed the duties of his office. One week later he was inoculated for small-pox and died on the 22d of March. On the 9th of May, 1759, the Rev. Samuel Davies was elected to the Presidency and on the 26th of July entered upon the duties of his office. He died February 4, 1761.

During his administration there were no material changes in the course of instruction; more attention, however, was given to the cultivation of English composition and elocution. President Davies gave much of his time to the building up of a suitable library for the College.

The Rev. Samuel Finley had been proposed for the Presidency at the meeting at which Mr. Davies was elected, and upon the death of the latter he was unanimously chosen as his successor. His administration lasted until the 17th of July, 1766, the date of his death. During this period the course of instruction remained the same as in former years, and the College maintained a steady growth.

On the 19th of November, 1766, the trustees elected to the Presidency, John Witherspoon, D.D., LL.D., of Paisley, Scotland. Dr. Witherspoon at first declined; a year later, however, he accepted a reëlection and became sixth President of the College of New Jersey.

Dr. Witherspoon arrived in America during the summer of 1768 and was inaugurated on the 17th of August. The shadow of the approaching Revolution was already spread-

ing over the Colonies, and among the students of this period (1770), were many who became leading figures in the great struggle and in the solution of the constitutional problem which at the close of the war offered itself to every thoughtful mind. James Madison, Aaron Burr, Gunning Bedford, William Bradford, Philip Freneau, Hugh Henry Brackenridge, Henry Lee, Morgan Lewis, and Henry Brockholst Livingston were some of the pupils over whom Witherspoon was called to preside.

For nearly eight years the varying fortunes of the Revolution told heavily on the College. The course of instruction was interrupted by the presence of both armies, Nassau Hall was wrecked, the library scattered and destroyed, and the philosophical apparatus, including the famous orrery made by David Rittenhouse of Philadelphia, ruined. During this period but one Commencement was omitted, that of 1777. The members of the graduating class of that year, seven in number, received their degrees a few months later and are accounted graduates for that year.

College orders were regularly resumed after the enemy had abandoned their occupation of the State, although, according to President Witherspoon's report, given through the press in 1779, the number of students did not at any time exceed ten.

The impoverished condition of the country, consequent upon the war of the Revolution, laid a heavy burden upon the shoulders of the President and Trustees. Great credit is due to the perseverance and untiring energy displayed by President Witherspoon throughout his administration in meeting and overcoming these difficulties. He died November 15, 1794.

His successor, Samuel Stanhope Smith, D.D., LL.D., a graduate of the College in the Class of 1769, was elected to the Presidency May 6, 1795. During his term of office

the course of instruction was broadened and the curriculum enlarged. Among the most important changes was the establishment of a professorship in chemistry. This was the first provision for regular instruction in this branch of science made by an American college. A grant of six hundred pounds per annum for three years was secured from the Legislature of the State, to reimburse the College for the damage sustained to its buildings, library, and philosophical apparatus during the Revolution. This appropriation, however, was not equal by a thousand dollars to the expense of repairing the philosophical apparatus.

On the 6th of March, 1802, Nassau Hall was destroyed, save for the outer walls, by fire, together with almost the entire library and part of the philosophical apparatus. Steps were at once taken to raise funds wherewith to repair the loss, and an elaborate address "To the Inhabitants of the United States" was issued by the Trustees. In this appeal they were so far successful that by the 4th of April, 1804, more than forty-four thousand dollars had been collected. The rebuilding of Nassau Hall was completed during the summer of 1804.

Dr. Smith resigned the Presidency August 14, 1812, and was succeeded by Ashbel Green, D.D., LL.D., a graduate of the College (1783). Dr. Green tendered his resignation to the Trustees September 25, 1822. During this period of ten years the institution maintained a steady growth, both in the number of students and in the income from its invested funds.

On the 26th of September, 1822, the Trustees elected to the Presidency the Rev. John Holt Rice of Richmond, Virginia. Dr. Rice, being in poor health, declined and the duties of the office for a time devolved upon the Vice-President, Philip Lindsley.

James Carnahan, D.D., LL.D., of the Class of 1800, was elected upon the 12th of May, 1823, and was inaugu-

rated President on August 6th of that year. President Carnahan's term of office was one of marked increase in the growth and development of the College. During his administration of thirty-one years, sixteen hundred and thirty-four students were graduated from the Institution; the teaching corps was increased from two professors and two tutors, in 1823, to six professors, two assistant professors, and four tutors in 1854, and not less than seventy-five thousand dollars was expended in the erection of new buildings, the purchase of apparatus and books, and the improvement of the College grounds.

A department of law was established in 1846, under the direction of the Hon. Joseph C. Hornblower, Chief Justice of the Supreme Court of New Jersey, James S. Green, and Richard S. Field, Attorneys. The degree of Bachelor of Laws was given for two years' resident study. There being no funds available for the support of this department, the lectures were abandoned in 1852. During this period the degree of Bachelor of Laws was conferred upon seven persons.

President Carnahan resigned in 1853, but upon the request of the Board retained the office until the Commencement of 1854.

John Maclean, D.D., LL.D., of the Class of 1816, was elected to the Presidency December 20, 1853, and inaugurated Wednesday, June 28, 1854. Dr. Maclean resigned December 11, 1867, retaining the office until the Commencement of 1868. During this period the number of students increased from 247 in 1854, to 281 in 1868. The Civil War deprived the institution of a large proportion of its students and is largely responsible for the small increase. Four new professorships were established, having a total endowment of $195,000, and the teaching corps increased to twenty. The movement to establish free scholarships in the College, undertaken during the last years of President Carnahan's

administration, was successful in obtaining $60,000. The interior of Nassau Hall was destroyed by fire for the second time on the night of the 10th of March, 1855. The damage to the building, the walls alone standing, amounted to above $50,000, upon which there was an insurance of $12,000. The work of rebuilding Nassau Hall was completed during the spring of 1860.

James McCosh, D.D., LL.D., Litt.D., of Queen's College, Belfast, was elected President of the College on the 29th of April, 1868. Dr. McCosh resigned the office in 1888, after an administration of twenty years. Under President McCosh the number of students increased from 281 in 1868, to 603 in 1887. Gifts amounting to upwards of three millions of dollars were contributed during this period, of which one million was expended in the erection of fourteen buildings. Among the more important changes in the curriculum were the introduction of the system of elective studies (1870); the founding of the John C. Green School of Science (1873), offering courses leading to the degrees of Bachelor of Science, Civil Engineer, and Master of Science; and the establishment of the Graduate Department (1877). The Faculty was enlarged from ten professors and seven tutors in 1868, to thirty-one professors, four assistant professors, and five tutors and instructors—a total of forty—in 1888.

Francis Landey Patton, D.D., LL.D., twelfth President of the College of New Jersey, was elected February 9, 1888, and inaugurated June 20, 1888. President Patton resigned the office June 9, 1902. During his administration of fourteen years the student enrolment increased from 603 in 1888, to 1354 in 1902. The Faculty numbered forty in 1888; in 1902, one hundred. Seventeen new buildings were erected during President Patton's incumbency.

In October, 1896, the one hundred and fiftieth anniversary of the signing of the First Charter of the College of

New Jersey was celebrated; on the anniversary day, October 22, 1896, the title of Princeton University was assumed.

In 1900 a plan for Alumni Representation in the Board of Trustees was adopted. By this plan the Board of Trustees was enlarged by the addition of five members to be known as Alumni Trustees, one to be elected yearly, and to be eligible for re-election, who shall hold office for a term of five years from and after their election. No one is eligible for election as an Alumni Trustee except a graduate of Princeton University of not less than ten years standing. All graduates of Princeton University of not less than three years' standing, who have paid the enrolment fee of one dollar, are entitled to nominate and vote for Alumni Trustees at any election. If, however, during a period of five consecutive years, an enrolled graduate shall not have availed himself of the privilege of nominating or voting for Alumni Trustees, his name shall be removed from the list, and it can be restored again only upon his application and the payment of another enrolment fee. The annual election is held in Princeton on Commencement day.

Woodrow Wilson, Ph.D., Litt.D., LL.D., of the Class of 1879, was elected to the Presidency in June, 1902, and inaugurated on the 25th of October of the same year. President Wilson resigned October 20th, 1910, having accepted the Democratic nomination for Governor of New Jersey. During his administration the undergraduate course of study was thoroughly revised; the Preceptorial System of instruction was established, thereby adding about fifty members to the teaching staff; the Faculty was further strengthened by the addition of a considerable number of professors distinguished in their several departments of study; the facilities of the University for both classroom and laboratory work were greatly increased by the building and equipment of a handsome recitation hall and of unusually

large and adequate laboratories for physics, biology, and geology; several new dormitories were erected; and large endowments were received for the development of the Graduate School.

On October 20, 1910, the Hon. John Aikman Stewart, LL.D., Senior Trustee, was appointed President *pro tempore,* by resolution of the Board of Trustees. President Stewart held the office until the election of President Hibben, January 11, 1912. During his administration he was greatly aided in the performance of the academic duties of the Presidency by Henry Burchard Fine, Ph.D., LL.D., Dean of the Faculty.

John Grier Hibben, Ph.D., LL.D., of the Class of 1882, was elected President of the University on January 11, 1912, and formally inaugurated on May 11th of the same year.

The title of the Corporation as now constituted is The Trustees of Princeton University.

FORM OF BEQUEST

I give and bequest to the Trustees of Princeton University, located at Princeton, in the State of New Jersey, the sum of ..... dollars, the same to be free from succession tax, if any should exist thereon, and to be used as the Board of Trustees shall determine (or, in the case of a special gift, stating the terms of the gift).

PART III

TERMS OF ADMISSION

TERMS OF ADMISSION TO PRINCETON UNIVERSITY

For admission to the Freshman Class a candidate must satisfy the requirements of one of the two methods described below:

I. Regular Method of Admission Open to all Candidates

1. A candidate must pass satisfactorily written examinations in all of the subjects required for admission as enumerated on pp. 79 to 81 of this catalogue. He may, however, be admitted conditionally if he is deficient in a small part only of the subjects required.

2. Each applicant for admission should be provided with a statement, signed by his teacher, as to his fitness to be examined in each of the subjects which he offers. This statement is for the information of the examiners, and is in no sense an admission certificate. Blank forms may be obtained from the Registrar.

3. (*Preliminary Examination.*)

At the examinations in June and September, candidates for admission to the Freshman Class at some later time are admitted to examination in a portion of the subjects required for entrance. Each candidate for preliminary examination must present a certificate, signed by his teacher, stating that he is prepared in each of the subjects which he may offer. *No credit will be given for a preliminary examination in any subject in which the candidate is not so certified.*

II. An Alternative Method of Admission Open to Candidates of Exceptional Ability and Attainment

In addition to the regular method of entrance to the Freshman Class *in courses leading to the bachelor's degrees,* the following method is open to candidates of exceptional ability and attainment. (This method can be used by those who decide late in their school course to enter Princeton.)

Such a candidate may send to the Registrar not later than two weeks before the beginning of either the June or the September examinations a detailed statement, signed by the principal of his school, which shall show the course of study which he has pursued during the past four years, and the degree of proficiency which he has attained in each subject.

If the Committee on Entrance is satisfied from this statement that the candidate has completed the subjects required for admission to Princeton, and that he has attained a degree of proficiency distinctly above the average, it may give him permission to apply for entrance under this plan. This permission will not be granted to candidates who have previously failed in any Princeton examinations for entrance under the regular plan.

A candidate so accepted must present himself for examination in four subjects designated by the Committee. This examination will be based on the advanced or later portions of his work in the four principal subjects required for admission (i. e., Latin, English, Mathematics, and Greek or Modern Languages), and will also test his general command of each of these subjects.

A candidate who passes creditably in all these subjects will be admitted to the Freshman Class without conditions.

If in the June examinations the candidate fails in only one subject, he may be reëxamined in that subject in September. If he fails in two subjects, he must repeat all four examinations in September.

ENTRANCE FEE

Each candidate who proposes to take the Princeton entrance examinations in June should send to the Registrar before June 1st:

1. A statement containing his full name and the name and address of his parent, or guardian, and of his school. If he has taken preliminary examinations, this should be stated.

2. A fee of five dollars, either by money order or cheque payable to *Princeton University*.

In return he will receive a receipt from the Registrar which he must show to the examiner when he registers at the examination.

Candidates who have not sent this statement and fee may be admitted to the examinations; in such cases the reports of the results of the examinations may be delayed, and in no case will a report be sent until the fee is received.

Each candidate who takes his examinations in September must pay the fee, unless he has already paid it in June, but those who have paid the fee in June shall be admitted without further payment to the September examinations of the same year. Candidates taking examinations in different years shall pay the fee each year.

Each candidate admitted to any class otherwise than by the regular examinations of the University (*e. g.*, on certificate of the College Entrance Examination Board) shall pay an admission fee of five dollars.

ENTRANCE EXAMINATIONS

In June 1913 the order of examinations will be as follows:

Wednesday—11 June, 1913.

8.30- 9.00. Registration of all candidates.
9.00-11.00. Algebra I and II.

11.00-12.00. Ancient History.
12.00- 1.00. American History.
*2.30- 4.30. Chemistry.
*2.30- 4.30. Greek A and B.
4.30- 5.30. English History.

Thursday—12 June, 1913.

9.00-11.00. Latin A (Grammar, Composition, Caesar).
11.00-12.00. Latin B (Cicero).
12.00- 1.00. Latin C (Virgil).
2.30- 4.00. English A.
4.00- 5.30. English B.

Friday—13 June, 1913.

8.30-11.00. Plane and Solid Geometry.
*11.00-12.00. Greek C (Homer).
*11.00- 1.00. Physics.
2.30- 4.00. Elementary German (German A).
2.30- 5.30. Intermediate German (German B).

Saturday—14 June, 1913.

9.00-11.00. Elementary French (French A).
9.00-12.00. Intermediate French (French B).
1.30- 3.30. Plane Trigonometry.

In September 1913 the order of examinations will be as follows:

Thursday—18 September, 1913.

8.30- 9.00. Registration of all candidates.
9.00-11.00. Algebra I and II.
11.00-12.00. Ancient History.

*Any candidate who wishes to offer Chemistry and Greek A or B, or Physics and Greek C at the same examination must notify the Registrar in advance.

12.00- 1.00. American History.
*2.30- 4.30. Chemistry.
*2.30- 4.30. Greek A and B.
4.30- 5.30. English History.

Friday—19 September, 1913.

9.00-11.00. Latin A (Grammar, Composition, Caesar).
11.00-12.00. Latin B (Cicero).
12.00- 1.00. Latin C (Virgil).
2.30- 4.00. English A.
4.00- 5.30. English B.

Saturday—20 September, 1913.

8.30-11.00. Plane and Solid Geometry.
*11.00-12.00. Greek C (Homer).
*11.00- 1.00. Physics.
2.30- 4.00. Elementary German (German A).
2.30- 5.30. Intermediate German (German B).

Monday—22 September, 1913.

9.00-11.00. Elementary French (French A).
9.00-12.00. Intermediate French (French B).
1.30- 3.30. Plane Trigonometry.

All candidates are expected to appear promptly at the time set for an examination. No candidate will be allowed to enter an examination later than an hour after the scheduled time; and no candidate who has seen a question paper will be allowed to leave the examination until an hour and a half shall have elapsed.

Applicants who have any conditions or other deficiencies from the June examinations are required to remove them at the September entrance examinations.

*See footnote on preceding page.

Two regular examinations for admission are held each year, one in June and one in September. In June, examinations are held in the places named in the following list, and at other schools and cities where the number of candidates, or the distance from places where regular examinations are held, may justify. Requests for examinations at places other than those here named should be addressed to the Registrar before April 1. In September, examinations are held in Princeton only.

ALABAMA

Mobile: at the University Military School, 933 Dauphin Way

CALIFORNIA

Los Angeles: in the Y. M. C. A. Building, South Hope St.

COLORADO

Denver: at the East Side High School

CONNECTICUT

Cheshire: at the Cheshire School
Pomfret Center: at the Pomfret School
Wallingford: at the Choate School
Washington: at the Gunnery School

DELAWARE

Wilmington: at the Friends' School

DISTRICT OF COLUMBIA

Washington: in the Y. M. C. A. Building, 1736 G St., N. W.

FLORIDA

Jacksonville: in the Law Offices of Cooper & Cooper
Pensacola: at the Pensacola Classical School

ILLINOIS

Chicago: in Hurd Hall, Northwestern University Law School Building, 87 East Lake St.

INDIANA

Culver: at the Culver Military Academy

Indianapolis: at the Shortridge High School

KENTUCKY

Louisville: in the office of the Fidelity Trust Co., 206-210 Fifth St.

MARYLAND

Baltimore: in the Y. M. C. A. Building, Cathedral and Franklin Sts.

Port Deposit: at the Tome School

MASSACHUSETTS

Andover: at the Phillips Academy

Boston: in the Young Men's Christian Union Building, 48 Boylston St.

Mount Hermon: at the Mount Hermon Boys' School

MICHIGAN

Detroit: at the Central High School

MINNESOTA

St. Paul: in charge of Mr. J. D. Denegre, Gilfillan Block

MISSOURI

Kansas City: at the Central High School

St. Louis: in the Board of Education Building, Ninth and Locust Sts.

NEBRASKA

Omaha: in charge of Dr. Paul H. Ludington, 811 Brandeis Building

NEW HAMPSHIRE

Concord: at the St. Paul's School
Plymouth: at the Holderness School

NEW JERSEY

Bordentown: at the Bordentown Military Institute
Hightstown: at Peddie Institute
Lawrenceville: at the Lawrenceville School
Morristown: at the Morris Academy
Newark: at the Newark Academy, High and William Sts.
Princeton: Room 10, McCosh Hall
Trenton: in the Y. M. C. A. Building

NEW YORK

Albany: at the Albany Academy
Buffalo: at the Masten Park High School
Dobbs Ferry: at the Mackenzie School
Garden City: at the St. Paul's School
Hoosick: at the Hoosac School
Lake Placid: at the Lake Placid School.
Mohegan: at the Mohegan Lake School
New York: in the Y. M. C. A. Building, Twenty-third St., near Seventh Ave.
Ossining: at the Holbrook School
Pawling: at the Pawling School
Poughkeepsie: at the Riverview Academy
Rochester: in the Municipal Building, South Fitzhugh St.
Syracuse: in the rooms of the University Club, Larned Building

NORTH CAROLINA

Asheville: at the Asheville School

OHIO

Cincinnati: at the Hughes High School
Cleveland: at the University School, Hough Ave. and Seventy-first St.
Youngstown: at the Rayen School

OREGON

Portland: at the Portland Academy

PENNSYLVANIA

Harrisburg: in the Y. M. C. A. Building
Mercersburg: at the Mercersburg Academy
Pennsburg: at the Perkiomen Seminary
Philadelphia: at the Central High School
Pittsburgh: at Shady-Side Academy
Pottstown: at the Hill School
Saltsburg: at the Kiskiminetas Springs School
Wilkes-Barre: in the rooms of the Luzerne County Medical Society, Anthracite Building, West Market St.

TENNESSEE

Chattanooga: at Baylor's University School
Memphis: at the University School
Nashville: in the Carnegie Library

TEXAS

San Antonio: at the San Antonio Academy

WASHINGTON

Seattle: at the Broadway High School
Spokane: at the Lewis and Clark High School
Tacoma: at the High School

FRANCE

Paris: at the Anglo-Saxon School, 55 Boulevard Suchet

GERMANY

Munich: at the Coit School for Boys, Konradstrasse 14.

Examinations at other than the specified times are granted only under very exceptional circumstances. An applicant for examination at a special time must present a satisfactory reason and obtain permission by writing to the Registrar and is required to pay into the treasury a fee of $10 for every subject, or part thereof, in which an examination is set. No special examinations are held outside of Princeton.

All candidates for admission to any class, or as special students, must bring with them satisfactory testimonials of good moral character, preferably from their last instructors, and if the candidate has been a member of another college, university, or similar institution, he must produce a certificate from its president or faculty that he is free from censure in that institution.

No candidate is admitted into the undergraduate department in regular class standing without examination and a vote of the Faculty.

FRESHMAN ENTRANCE REQUIREMENTS

The following entrance requirements are defined for the most part in close accordance with the recommendations of the National Educational Association and of the College Entrance Examination Board. It is recommended that candidates be prepared for examination on the requirements as specified, but equivalents will be accepted. The University will in all cases be the judge of the equivalence of subjects offered as substitutes for the specified requirements.

There are three regular forms of entrance to the courses leading to degrees in Princeton University, *viz.:* (1) Entrance for those who offer Greek and are candidates for the degree of A.B. (2) Entrance for those who do not offer Greek and are candidates for the degree of B.S. or Litt.B., for which the entrance requirements are identical. (3)

Entrance for those who are candidates for the degree of C.E.

The degree of Bachelor of Science is open to those who concentrate in one of the Mathematical or Scientific Departments during the Junior and Senior Years; the degree of Bachelor of Letters to those who concentrate in one of the Departments in philosophical, political, literary, or other humanistic studies.

The Freshman entrance requirements for candidates for the various degrees given in course in Princeton University are as follows: (The detailed statements of subjects are given on pages 81 to 94).

FRESHMAN ENTRANCE REQUIREMENTS FOR THE COURSES LEADING TO THE DEGREES OF A.B., B.S. AND LITT.B.

Every candidate must offer all the subjects in one of the following lists:

A.B. COURSE.	B.S.—LITT.B. Course.
GREEK.	MODERN LANGUAGES: Either
1. Greek A	1. French A, or
2. Greek B	1. German A
3. Greek C	
LATIN	LATIN
1. Latin A	1. Latin A
2. Latin B	2. Latin B
3. Latin C	3. Latin C
ENGLISH.	ENGLISH.
1. English A (reading)	1. English A (reading)
2. English B (careful study)	2. English B (careful study)
MATHEMATICS.	MATHEMATICS.
1. Algebra to Quadratics	1. Algebra to Quadratics
2. Algebra, Quadratics through the Binomial Theorem	2. Algebra, Quadratics through the Binomial Theorem
4. Plane Geometry	4. Plane Geometry

In addition to the prescribed subjects named above, every candidate must offer such a selection of subjects from the following list that the sum of values assigned (in paren-

theses) to the several subjects shall amount to not less than five for the A.B. candidate and to not less than seven for the B.S.-Litt.B. candidate. But no candidate may offer more than two of the three subjects in History.

HISTORY. Not more than *two* of:
1. American History and Civil Government (1)
2. English History (1)
3. Ancient History (1)

MODERN LANGUAGES.
1. French A (4), if not offered in the list of prescribed subjects
2. French B (2)
1. German A (4), if not offered in the list of prescribed subjects
2. German B (2)

MATHEMATICS.
5. Solid Geometry (1)
6. Plane Trigonometry (1)

SCIENCE.
1. Physics (2)
1. Chemistry (2)

FRESHMAN ENTRANCE REQUIREMENTS FOR THE COURSE LEADING TO THE DEGREE OF C.E.

N. B.—No student will be admitted to regular standing in the C.E. Freshman Class who has failed to pass all the Mathematical subjects required for entrance; and no student who has any deficiency in Mathematics will be admitted even on trial, unless this deficiency is slight and the quality of his work in other subjects required for entrance is high.

Every candidate for admission to the C.E. course must offer the following subjects:

ENGLISH.
1. English A (reading)
2. English B (careful study)

FOREIGN LANGUAGES: Any two of the three languages:
Latin: 1. Latin A
French: 1. French A
German: 1. German A

MATHEMATICS.

1. Algebra to Quadratics
2. Algebra, Quadratics through the Binomial Theorem
4. Plane Geometry
5. Solid Geometry
6. Plane Trigonometry

SCIENCE: Either

1. Physics, or
1. Chemistry

In addition to the prescribed subjects named above every candidate for the C.E. course must offer such a selection of subjects from the following list that the sum of the values assigned (in parentheses) to the several subjects shall amount to not less than five. But no candidate may offer more than two of the three subjects in History.

HISTORY. Not more than *two* of:

1. American History (1)
2. English History (1)
3. Ancient History (1)

FOREIGN LANGUAGES.

1. Latin A (4), if not offered in the list of prescribed subjects
2. Latin B (2)
3. Latin C (2)
1. French A (4), if not offered in the list of prescribed subjects
2. French B (2)
1. German A (4), if not offered in the list of prescribed subjects
2. German B (2)

SCIENCE.

1. Physics (2), if not offered in the list of prescribed subjects
1. Chemistry (2), if not offered in the list of prescribed subjects

[It is recommended that all candidates should receive instruction in free-hand drawing before entrance.]

FRESHMAN ENTRANCE SUBJECTS

HISTORY

It is recommended that each of the following courses be pursued in the spirit and by the methods suggested in the

Report of the Committee of Seven of the American Historical Association on the Study of History in Schools. (The Macmillan Co., 1899.)

1. *American History and Civil Government.* The course of study recommended for American History and Civil Government should occupy four exercises a week for one year. Military details may be omitted. The origins of the American people and the development of their political life should be clearly understood in their main outlines.

2. *English History.* For the period preceding the Norman invasion a brief outline will suffice. The course of English History after that event down to 1850 should be carefully studied with proper reference to the development of political institutions.

3. *Ancient History.* For the present the requirement will be restricted to Greek History to the death of Alexander the Great, and Roman History to the accession of Commodus. As soon as it appears practicable, notice will be given and the requirement will be extended to comprise "Ancient History, with special reference to Greek and Roman History, and including also a short introductory study of the more ancient nations and the chief events of the Middle Ages down to the death of Charles the Great (814)." It is recommended that instruction in the schools should be extended to comprise Ancient History in the sense above defined.

GREEK

Greek A. Grammar: the inflections; the simpler rules for composition and derivation of words; syntax of cases and moods; structure of the sentence in general, with particular regard to relative and conditional sentences.

Greek B. Greek composition and Xenophon's *Anabasis*. This examination will assume the reading of four books of

Xenophon's *Anabasis*. The paper will also include sight translation of prose of no greater difficulty than Xenophon's *Anabasis*. The sentences set for translation into Greek will be designed to test primarily the candidate's knowledge of forms and of the principles of syntax, and will be based on the first two books of the *Anabasis*.

Greek C. Homer. The examination will assume the reading of the first three books of the *Iliad* (with the omission of Book II, 494-end).

LATIN

The following requirements in Latin are in accordance with the recommendations made by the Commission on College Entrance Requirements in Latin, October, 1909.

I. *Amount and Range of the Reading Required*

1. The Latin reading, without regard to the prescription of particular authors and works, shall not be less *in amount* than Caesar, *Gallic War*, I-IV; Cicero, the orations against Catiline, for the Manilian Law, and for Archias; Virgil, *Æneid*, I-VI.

2. The amount of reading specified above shall be selected by the schools from the following authors and works; Caesar (*Gallic War* and *Civil War*) and Nepos (*Lives*); Cicero (*Orations, Letters,* and *De Senectute*) and Sallust (*Catiline* and *Jugurtha*); Virgil (*Bucolics, Georgics,* and *Æneid*) and Ovid (*Metamorphoses, Fasti,* and *Tristia*).

II. *Scope of the Examinations*

1. *Translation at Sight*. Candidates will be examined in translation at sight of both prose and verse. The vocabulary, constructions, and range of ideas of the passages set will be suited to the preparation secured by the reading indicated above.

2. *Prescribed Reading.* Candidates will be examined also upon the following prescribed reading: Cicero, orations for the Manilian Law and for Archias, and Virgil, *Æneid,* I, II, and either IV or VI, at the option of the candidate, with questions on subject-matter, literary and historical allusions, and prosody. Every paper in which passages from the prescribed reading are set for translation will contain also one or more passages for translation at sight; and candidates must deal satisfactorily with both these parts of the paper, or they will not be given credit for either part.

3. *Grammar and Composition.* The examinations in grammar and composition will demand thorough knowledge of all regular inflections, all common irregular forms, and the ordinary syntax and vocabulary of the prose authors read in school, with ability to use this knowledge in writing simple Latin prose.

Suggestions Concerning Preparation

Exercises in translation at sight should begin in school with the first lessons in which Latin sentences of any length occur, and should continue throughout the course with sufficient frequency to insure correct methods of work on the part of the student. From the outset particular attention should be given to developing the ability to take in the meaning of each word—and so, gradually, of the whole sentence —just as it stands; the sentence should be read and understood in the order of the original, with full appreciation of the force of each word as it comes, so far as this can be known or inferred from that which has preceded, and from the form and the position of the word itself. The habit of reading in this way should be encouraged and cultivated as the best preparation for all the translating that the student has to do. No translation, however, should be a mechanical metaphrase. Nor should it be a mere loose paraphrase.

The full meaning of the passage to be translated, gathered in the way described above, should finally be expressed in clear and natural English.

A written examination cannot test the ear or tongue, but proper instruction in any language will necessarily include the training of both. The school work in Latin, therefore, should include much reading aloud, writing from dictation, and translation from the teacher's reading. Learning suitable passages by heart is also very useful, and should be more practised.

The work in composition should give the student a better understanding of the Latin he is reading at the time, if it is prose, and greater facility in reading. It is desirable, however, that there should be systematic and regular work in composition during the time in which poetry is read as well; for this work the prose authors already studied should be used as models.

Subjects for Examination

Latin A. This examination will be based upon the first two years' study of Latin, and will assume reading not less in amount than Caesar's *Gallic War,* Books I-IV, this reading to be selected from Caesar's *Gallic War* and *Civil War,* and Nepos' *Lives,* and will include sight translation, examination upon grammar (the inflections, the simpler rules for composition and derivation of words, syntax of cases and verbs, structure of the sentence in general, with particular regard to relative and conditional sentences, indirect discourse and the subjunctive), and some easy sentences for translation from English into Latin, illustrating grammatical principles.

Latin B. This examination will assume reading not less in amount than Cicero's orations against Catiline, for the Manilian Law and for Archias. (The last two orations are prescribed.) The reading shall be selected from Cicero's

Orations, Letters, De Senectute, Sallust's *Catiline,* and *Jugurtha.* It will include sight translation, grammatical questions, and compositions based upon Cicero.

Latin C. This examination will assume reading not less in amount than Virgil's *Æneid,* I to VI (Books I, II and either IV or VI of the *Æneid* are prescribed). The remainder of the reading shall be selected from Virgil's *Bucolics, Georgics, Æneid,* and Ovid's *Metamorphoses; Fasti, Tristia.*

ENGLISH

(Both 1 and 2 to be offered by all candidates.)

The purpose of the examination is to test the candidate's knowledge and appreciation of certain masterpieces of English literature and his proficiency in English composition. The books prescribed for reading and for study are those recommended by the National Conference on Uniform Entrance Requirements in English.

1. *English A.* (Reading.) The candidate may offer for examination any list of ten units which conforms to the requirements recommended by the National Conference on Uniform Entrance Requirements as printed below.

For 1913, 1914, and 1915:

The books provided for reading are arranged in the following groups, from which at least ten units* are to be selected, two from each group:

I. The *Old Testament,* comprising at least the chief narrative episodes in Genesis, Exodus, Joshua, Judges, Samuel, Kings, and Daniel, together with the books of Ruth and Esther; the *Odyssey,* with the omission, if desired, of Books I, II, III, IV, V, XV, XVI, XVII; the *Iliad,* with the omission, if desired, of Books XI, XIII, XIV, XV, XVII, XXI; Virgil's *Æneid.* The *Odyssey, Iliad,* and *Æneid*

*Each unit is set off by semicolons.

should be read in English translations of recognized literary excellence.

For any unit of this group a unit from any other group may be substituted.

II. Shakespeare's *The Merchant of Venice; Midsummer Night's Dream; As You Like It; Twelfth Night; Henry the Fifth; Julius Caesar.*

III. Defoe's *Robinson Crusoe, Part I;* Goldsmith's *The Vicar of Wakefield;* either Scott's *Ivanhoe,* or Scott's *Quentin Durward;* Hawthorne's *The House of the Seven Gables;* either Dickens' *David Copperfield,* or Dickens' *A Tale of Two Cities;* Thackeray's *Henry Esmond;* Mrs. Gaskell's *Cranford;* George Eliot's *Silas Marner;* Stevenson's *Treasure Island.*

IV. Bunyan's *Pilgrim's Progress, Part I; The Sir Roger de Coverley Papers* in the Spectator; Franklin's *Autobiography* (condensed); Irving's *Sketch Book;* Macaulay's *Essays on Lord Clive* and *Warren Hastings;* Thackeray's *English Humorists; Selections* from Lincoln, including at least the two Inaugurals, the Speeches in Independence Hall and at Gettysburg, the Last Public Address, and Letter to Horace Greeley, along with a brief memoir or estimate; Parkman's *Oregon Trail;* either Thoreau's *Walden,* or Huxley's *Autobiography* and selections from *Lay Sermons,* including the addresses on *Improving Natural Knowledge, A Liberal Education,* and *A Piece of Chalk;* Stevenson's *Inland Voyage* and *Travels with a Donkey.*

V. Palgrave's *Golden Treasury (First Series), Books II and III,* with especial attention to Dryden, Collins, Gray, Cowper, and Burns; Gray's *Elegy in a Country Churchyard* and Goldsmith's *The Deserted Village;* Coleridge's *The Ancient Mariner* and Lowell's *The Vision of Sir Launfal;* Scott's *The Lady of the Lake;* Byron's *Childe Harold,*

Canto IV, and *The Prisoner of Chillon;* Palgrave's *Golden Treasury* (*First Series*) *Book IV,* with especial attention to Wordsworth, Keats, and Shelley; Poe's *The Raven,* Longfellow's *The Courtship of Miles Standish,* and Whittier's *Snow Bound;* Macaulay's *Lays of Ancient Rome* and Arnold's *Sohrab and Rustum;* Tennyson's *Gareth and Lynette, Lancelot and Elaine,* and *The Passing of Arthur;* Browning's *Cavalier Tunes, The Lost Leader, How They Brought the Good News from Ghent to Aix, Home Thoughts from Abroad, Home Thoughts from the Sea, Incident of the French Camp, Hervé Riel, Pheidippides, My Last Duchess, Up at a Villa—Down in the City.*

The following books, chosen from this list, are specially recommended; the examination will, however, be based on the complete list.

The *Old Testament;* the *Odyssey* in English translation; Shakespeare's *As You Like It* and *Julius Caesar;* Defoe's *Robinson Crusoe, Part I;* Scott's *Quentin Durward; Selections* from Lincoln; Macaulay's *Lord Clive* and *Warren Hastings;* Gray's *Elegy Written in a Country Churchyard* and Goldsmith's *Deserted Village;* Byron's *Prisoner of Chillon* and Arnold's *Sohrab and Rustum.*

The examination will consist of (1) questions and topics on the books offered, and (2) the writing of a short composition on some subject drawn from the candidate's general knowledge and experience. No candidate will be accepted in English A whose work is seriously defective in spelling, punctuation, idiom, or division into paragraphs.

2. *English B.* (Careful study.) For 1912, 1913, 1914, and 1915: Shakespeare's *Macbeth;* Milton's *Comus, L'Allegro,* and *Il Penseroso;* Burke's *Speech on Conciliation with America,* or Washington's *Farewell Address* and Webster's *First Bunker Hill Oration;* Macaulay's *Life of Johnson,* or Carlyle's *Essay on Burns.*

The examination will consist of (1) questions upon the content, form, and structure of the prescribed books, and upon the meaning of such words, phrases, and allusions as may be necessary to an understanding of them, and (2) the writing of a composition on some subject drawn from the books prescribed for study, from the candidate's other studies, or from his general knowledge and experience. Questions may also be asked concerning the lives of the authors, their works, and the periods of literary history to which they belong. However accurate in subject-matter, no paper will be considered satisfactory if seriously defective in punctuation, spelling, or other essentials of good usage.

GERMAN

1. *German A.* Candidates should be able to translate at sight a passage of simple German; to put into German short English sentences taken from the language of every-day life or a passage of simple connected prose; and to answer questions upon the rudiments of grammar.

Satisfactory preparation for this examination is furnished in the two-year course in elementary German recommended by the Modern Language Association. The course comprises drill in pronunciation, memorizing easy sentences, the rudiments of grammar with easy exercises illustrating grammatical forms and principles, and the reading of 75 to 100 pages of graduated texts from a reader, followed by 150 to 200 pages of easy stories and plays. It is recommended, however, that not more than one play be read.

2. *German B.* Candidates should be able to translate at sight German prose of ordinary difficulty, whether recent or classical; to put into German a connected passage of ordinary English; and to answer any grammatical questions relating to usual forms and essential principles of the language, including syntax and word-formation.

Satisfactory preparation for this examination is furnished by the intermediate German course of three years recommended by the Modern Language Association. In addition to the preparation suggested for German A this preparation comprises the reading of about 400 pages of moderately difficult prose and poetry, with continued practice in grammar and composition.

FRENCH

1. *French A.* Candidates should be able to translate at sight easy French prose, to put into French simple English sentences, or a passage of easy connected prose, and to answer questions on the rudiments of the grammar.

Satisfactory preparation for this examination is furnished in the two-year course in elementary French recommended by the Modern Language Association. The course comprises drill in pronunciation, the rudiments of grammar, memorizing easy sentences, with easy exercises illustrating grammatical forms and principles, translation into French, writing French from dictation, and the reading of 100 to 175 pages of graduated texts, followed by 250 to 400 pages of easy modern prose in the form of stories, plays, or historical biographical sketches.

2. *French B.* Candidates should be able to translate at sight ordinary French prose or simple poetry, to put into French a connected passage of English prose and to answer questions involving a more thorough knowledge of syntax than is expected in French A.

Satisfactory preparation for this examination is furnished by the intermediate French course of three years recommended by the Modern Language Association. In addition to the course recommended for French A this preparation comprises the reading of from 400 to 600 pages of moderately difficult French, a portion of it to be in the dramatic form, exercise in giving French paraphrases, and continued practice in grammar and composition.

MATHEMATICS

In all numerical work special emphasis is laid upon accuracy and facility in reckoning.

In each of the following subjects simple original exercises will be set.

Problems having to do with lengths, areas, or volumes will usually be stated in terms of the metric system of weights and measures.

1. *Algebra to Quadratics, A I.* The four fundamental operations for rational algebraic expressions, factoring, highest common factor, lowest common multiple, complex fractions, the solution of equations of the first degree containing one or more unknown quantities, radicals including the extraction of the square root of polynomials and numbers, and fractional and negative exponents.

2. *Elementary Algebra, Quadratics through the Binomial Theorem, A II.* Quadratic equations, equations in one or more unknown quantities that can be solved by the methods of quadratic equations, ratio and proportion, the progressions, and the binomial theorem for positive integral exponents.

4. *Plane Geometry.* Demonstrations of theorems, and constructions and demonstrations of problems; the solution of simple numerical exercises, including lengths of lines and areas of the triangle, parallelogram, trapezoid, regular polygons, and circle; simple original exercises in constructions and demonstration.

5. *Solid Geometry.* Properties of straight lines and planes, of dihedral and polyhedral angles, of projections, of polyhedrons (including prisms, parallelopipeds, pyramids and the regular solids), of cylinders, cones, and spheres, of spherical triangles, and the mensuration of these solids and their surfaces.

6. *Plane Trigonometry.* Definitions of the six trigono-

metric functions as ratios, relations between these six functions, values of the functions for 0°, 30° 45°, 60°, 90°, 120°, 135°, etc., etc., formulas for the sine, cosine, and tangent of the sum or difference of two angles for all angles, formulas for the sum or difference of two sines or two cosines, expressions for the functions of double and half angles, trigonometric identities and equations, theory of logarithms and the use of trigonometric tables, and the solution of right and oblique plane triangles. A knowledge of the meaning of the circular measure of angles and of the inverse trigonometric functions is also desirable. The tables furnished for this examination are Huntington's four-place tables, abridged edition, published by the Harvard Coöperative Society, Cambridge, Mass.

PHYSICS

The entrance requirements in Physics may be met in either of the two following ways:—

1. *Physics A and B.* By passing an examination on the subject as presented in such text-books as those of Millikan and Gale, Carhart and Chute, Hoadley, or Gage's *Principles of Physics.* This examination is divided into two parts. *Physics A* consists of questions on the general laws of the subject, and the principles underlying certain physical phenomena; apart from the statement of the numerical relations involved in physical laws, this part of the examination is entirely descriptive. *Physics B* is devoted almost exclusively to numerical problems in the general subject.

2. *Physics B and the presentation of a satisfactory Laboratory note-book.* The examination in Physics B is described in the preceding paragraph. *The note-book* should contain accurate records of experimental work performed by the student during his course of preparation; it must bear the certificate of the instructor that the records were made

by the student himself, and that they are a faithful description of laboratory work actually done by him; and it should be paged and indexed. The minimum number of experiments which will be accepted is 33, and it is suggested that the most satisfactory apportionment of these 33 among the different divisions of the subject is as follows:—Mechanics 10, Heat 5, Light 5, Sound 2, Magnetism 3, and Electricity 8. In the case of the minimum number of experiments being submitted, this apportionment should be adhered to as closely as possible.

In order to meet requirement 1 at least one school year, with four or five recitations per week, should be devoted to the subject. This course should be accompanied by class-room demonstrations conducted by the teacher. Requirement 2 may be met in the same length of time by dividing the time about equally between recitations based on a suitable text-book and laboratory exercises performed by the student himself. While it is desirable that this laboratory work have a large range and accordingly be mainly of a qualitative character, still due stress should be laid upon the performance of exact quantitative work.

CHEMISTRY

1. *Chemistry.* The candidate's preparation should include: (1) The study of a standard text-book, (2) instruction by lecture-table demonstrations, and (3) individual laboratory work, embracing forty exercises selected from some such work as Smith and Keller's *Experiments for Students in General Chemistry.*

The requirement embraces the sources, preparation, physical and chemical properties of the following elements and their most important compounds: *hydrogen, oxygen, chlorine, nitrogen, carbon, bromine, iodine, fluorine, sulphur,* phosphorus, arsenic, *silicon, potassium, sodium, calcium,* magnesium, aluminium, *zinc, iron,* manganese, *copper,* mercury, silver, *lead,* and tin. Detailed study should be given

to the italicized elements and their compounds. Further, candidates should be well posted in matters relating to natural waters, the atmosphere, the laws of chemical combinations by weight and by volume, oxidation and reduction, combustion, nascent state, catalysis, bases, acids, and salts, the nature and structure of flames, precipitation, distillation, crystallization, the elementary gas laws and their applications, the atomic and molecular theories, equation writing, stoichiometrical calculations and valency. They should also have some elementary knowledge of chemical energy, mass action, equilibrium, and the ionic theory.

At the examination each candidate must hand in, along with his paper, a note-book containing a detailed record of the practical work done by him in the laboratory, and this note-book must bear the endorsement of his instructor.

The requirements are intended to be essentially equivalent to those specified in the Plan of Organization of the College Entrance Examination Board of the Middle States and Maryland.

EXAMINATIONS OF THE COLLEGE ENTRANCE EXAMINATION BOARD

Examination certificates issued by the College Examination Board will be accepted in place of the regular entrance examinations, in so far as the certificates presented correspond to the requirements of the University, in accordance with the "Table of Equivalents" given below. Candidates offering such certificates are required to submit therewith the testimonials as to character and general fitness prescribed above for the other candidates. The latter testimonial shall state definitely the amount of work done in each subject offered for examination.

The examinations of the Entrance Board will be held during the week June 16-21, 1913.

All applications for examination must be addressed to the Secretary of the College Entrance Examination Board, Post Office Sub-Station 84, New York, N. Y., and must be made upon a blank form to be obtained from the Secretary of the Board upon application.

Applications for examination at points in the United States east of the Mississippi River, also at Minneapolis, St. Louis and other points on the Mississippi River, must be received by the Secretary of the Board at least two weeks in advance of the examinations, that is, on or before Monday, June 2, 1913; applications for examination elsewhere in the United States or in Canada must be received at least three weeks in advance of the examinations, that is, on or before Monday, May 26, 1913; and applications for examination outside of the United States and Canada must be received at least five weeks in advance of the examinations, that is, on or before Monday, May 12, 1913.

Applications received later than the dates named will be accepted when it is possible to arrange for the admission of the candidate concerned, but only upon the payment of $5.00 in addition to the usual fee.

The examination fee is $5.00 for all candidates examined at points in the United States and Canada and $15.00 for all candidates examined outside of the United States and Canada. The fee (which cannot be accepted in advance of the application) should be remitted by postal order, express order, or draft on New York to the order of the College Entrance Examination Board.

A list of the places at which examinations are to be held by the Board in June, 1913, will be published about March 1. Requests that the examinations be held at particular points, to receive proper consideration, should be transmitted to the Secretary of the Board not later than February 1.

TABLE OF EQUIVALENTS

College Entrance Board	*Princeton*
ENGLISH	
(a) Reading and Practice	1. English A
(b) Study and Practice	2. English B
HISTORY	
(a) Ancient History	3. Ancient History
(c) English History	2. English History
(d) American History	1. American History
LATIN	
NR 1. Grammar NR 2. Elementary Prose Composition NR 3. Second Year Latin	1. Latin A
NR 4. Cicero and Sight Translation	2. Latin B
NR 5. Virgil and Sight Translation	3. Latin C
GREEK	
a, i. Grammar	1. Greek A
a, ii. Elementary Prose Composition b, Xenophon	2. Greek B
c, Homer, Iliad, Books I-III	3. Greek C
FRENCH	
a. Elementary	1. French A
b. Intermediate	2. French B
GERMAN	
a. Elementary	1. German A
b. Intermediate	2. German B
MATHEMATICS	
a. Elementary Algebra Complete	1. & 2. Algebra I & II
a, i. Algebra, to Quadratics	1. Algebra I
a, ii. Algebra, Quadratics and beyond	2. Algebra II

c. Plane Geometry	4. Plane Geometry
d. Solid Geometry	5. Solid Geometry
f. Plane Trigonometry	6. Plane Trigonometry

PHYSICS

Physics	2. Physics

CHEMISTRY

Chemistry	1. Chemistry

Examinations of the New York State Board of Regents

The Committee on Entrance may at its discretion accept the answer papers written by candidates in the examinations of the New York State Board of Regents, provided that these papers have been re-read and passed by the examiners at Princeton.

Asiatic Students

Any candidate for admission who is a native of Asia, and not of American or European parentage, may offer as a substitute for the regular requirement in Latin an equivalent in Arabic, Chinese, Sanskrit, or Pali. A candidate who wishes to make this substitution should notify the Registrar not later than March 1 of the year in which he plans to enter.

ADMISSION TO SPECIAL COURSES

In exceptional cases students are admitted to the privileges of the University, not as members of any one of the four regular classes or candidates for a degree, and are allowed to take special undergraduate courses, selected under the direction of the Faculty, in such a manner as to secure so full an employment of their time as in the regular course. Such special students are subject to the same regulations and discipline and to the same examinations in the

studies pursued as other undergraduates. Any one desiring to enter as a special student is expected to take the regular entrance examinations upon the subjects prerequisite to his courses and to pass in a sufficient number of subjects to show that he has an amount of preparation equivalent to that required of regular students. These special courses, however, are not offered to those who attempt to enter the regular course and fail to do so, nor to those who have failed in the regular course.

When special students are finally leaving the University certificates of proficiency, signed by the President and Registrar, may be granted them on report by the Committee on Examinations and Standing that they have completed the courses on their schedule.

STUDENTS PURSUING PARTIAL COURSES

Students in the Theological Seminary, or other properly qualified persons, may be admitted to one or more undergraduate courses in the University, paying $16 per course each term. Such students shall be entered as undergraduates in the catalogue under the caption "Students Pursuing Partial Courses."

ADMISSION FROM OTHER COLLEGES

A candidate coming from another college to which he was admitted by certificate will be held for the Princeton Freshman entrance requirements in each subject in which his standing in his former college was not in the upper half of his class. Such of these requirements as are not satisfied by examination at the time of admission must be satisfied in accordance with the rules which apply to students regularly admitted upon examination.

The candidate's credits for courses taken in the college from which he comes will be accepted in so far as these

courses are equivalent to courses given at Princeton. If his credits show that he has an amount of preparation equivalent to that required of a regular Freshman, he will be admitted and will be classified as a "Student Qualifying for Regular Standing." He will be assigned to those courses for which he is qualified, preference being given to such of the required courses as he may not have had. If at the end of two terms of residence in Princeton his work has been satisfactory, he may be enrolled as a regular student, his status being determined by his credits; or, in case he qualifies for it, he may receive a degree with the graduating class. In the meantime he will be subject to the same regulations and discipline as a regular student.

No person is admitted to the University as a candidate for a Bachelor's degree, or for the degree of Civil Engineer, after the beginning of the first term of the Senior year.

REGULATION CONCERNING SECRET SOCIETIES

Immediately after the beginning of the academic year the students entering the Undergraduate Department meet according to announcement for matriculation; and subscription to the following pledge is required by the Board of Trustees:

We, the undersigned, do individually for ourselves promise, without any mental reservation, that we will have no active connection whatever with any secret society, nor be present at the meetings of any secret society in this institution so long as we are members of Princeton University, it being understood that this promise has no reference to the American Whig and Cliosophic Societies. We also declare that we regard ourselves bound to keep this promise and on no account whatever to violate it.

PART IV

SYSTEM OF UNDERGRADUATE STUDY

SYSTEM OF UNDERGRADUATE STUDY

The courses of study offered to candidates for a Bachelor's degree extend through four academic years, and lead to the degrees of Bachelor of Arts (A.B.), Bachelor of Letters (Litt.B.), and Bachelor of Science (B.S.). The degree of Bachelor of Arts (A.B.) is open to those who, entering with Greek, fulfill the full classical requirements of Freshman and Sophomore years; candidates for the degree being free, after the two introductory years, to choose their studies in whatever department they prefer, whether philosophical, literary, or scientific. The degree of Bachelor of Letters (Litt.B.) is open to those who, having substituted for Greek at entrance either French or German or one of those languages and physics or chemistry, concentrate their studies in Junior and Senior years in one of the philosophical, literary, political, or other humanistic Departments. The degree of Bachelor of Science is open to those who, entering with a similar substitution for Greek, concentrate their studies in Junior and Senior years in one of the mathematical or scientific Departments. The degree of Civil Engineer is conferred upon those who complete the full course in Civil Engineering, as outlined on succeeding pages.

The schedule of every Sophomore, Junior, and Senior, who is a candidate for a Bachelor's degree, consists of five courses of three hours a week, subject only to such exemptions as are established for candidates for Special Honors.

The various courses of study offered are open only to students of that year to which the courses belong, except in cases where students are allowed or required to take a course belonging to a preceding year.

THE FRESHMAN YEAR

Candidates for the A.B. degree have in Freshman year sixteen class exercises a week of which two are in English, four in Latin, four in Greek, four in Mathematics, and two in the modern language offered at entrance. Any candidate for the A.B. degree who passes either French B, or German B, at entrance may elect an advanced course in the subject passed by him, or may begin the other modern language which he did not offer for entrance.

Candidates for the Litt.B. or B.S. degree have seventeen class exercises a week of which two are in English, four in Latin, four in Mathematics, four in Physics or Chemistry, and three in a modern language.

A course in Hygiene, one hour a week, both terms, and a course in Physical Education, three periods a week, both terms, are also required of all Freshmen, but the hours or periods of these courses are not to conflict with the hours already scheduled for each individual student in the curriculum.

FRESHMAN SCHEDULE

A.B.		Litt.B. or B.S.	
Greek	4 hours	Latin	4 hours
Latin	4 "	Mathematics	4 "
Mathematics	4 "	English	2 "
Mod. Lang.	2 "	Mod. Lang.	3 "
English	2 "	Physics or Chemistry*	4 "
Hygiene	1 "	Hygiene	1 "
Physical Education	3 "	Physical Education	3 "
	20		21

THE SOPHOMORE YEAR

The Sophomore courses, required and elective, arranged so as to include elementary courses prerequisite to the subsequent studies of the various departments, are as follows:

*Students in the B.S. or Litt. B. course who take Chemistry in Freshman year are required to take the first-year Physics in Sophomore year.

SOPHOMORE A.B.—REQUIRED

Physics
Introduction to Philosophy
Greek (1st term), Latin (2nd term)

SOPHOMORE A.B.—ELECTIVE (*Two courses to be taken*)

Latin (1st term), Greek (2nd term)
Chemistry
Mathematics
English (1st term), History (2nd term)
French (Advanced or Beginners')
German (Advanced or Beginners')

SOPHOMORE B.S. AND LITT.B. [for students who have taken Physics in Freshman Year]

REQUIRED

Latin or Mathematics
Physics (second course) or Chemistry (first course)
Logic (1st term), Psychology (2nd term)

ELECTIVE (*Two courses to be taken*)

Latin
Mathematics
Physics (second course)
Chemistry (first course)
Biology (with Chemistry)
Graphics, if Mathematics is taken
English (1st term), History (2nd term)
French (Advanced or Beginners')
German (Advanced or Beginners').

SOPHOMORE B.S. AND LITT.B [for students who have taken Chemistry in Freshman Year]

REQUIRED

Latin or Mathematics
Physics (1st course)
Logic (1st term), Psychology (2nd term)

ELECTIVE (*Two courses to be taken*)

Latin
Mathematics
Chemistry (2nd course)
Biology
Graphics, if Mathematics is taken

English (1st term), History (2nd term)
French (Advanced or Beginners')
German (Advanced or Beginners')

SOPHOMORE HONORS COURSE IN MATHEMATICS AND PHYSICS

A Sophomore electing the Honors Course in Mathematics and Physics takes one less elective course than is required in the regular course, but shall have seven hours a week in Mathematics and Physics (or Chemistry).

A Sophomore in candidacy for the degree of B.S. or Litt.B., who is also eligible for the Honors Course in Mathematics and Physics and has maintained first or second group rank in Freshman Physics, may enter the Honors Course in Mathematics and Physics, substituting for the Honors Course in Physics an Honors Course in Chemistry—namely, a course consisting of the lectures in general Inorganic Chemistry supplemented by special laboratory and conference work. (Chemistry 201, 202.) A student who avails himself of this permission shall have the same privileges as other Sophomores taking the Honors Course in Mathematics and Physics.

The student's choice of a Department for Junior and Senior years is largely conditioned by his selection of the electives in the Sophomore year. The Sophomore prerequisite and advised elective courses for the various Departments are as follows:

[PREREQUISITE Sophomore elective courses in small capitals. *Advised* Sophomore elective courses in italics.]

DEPARTMENT	PREREQUISITE AND ADVISED ELECTIVE COURSES	FOR DEGREE OF
I. *Philosophy*	*A Foreign Language*	A.B.&Litt.B.
II. *History, Politics, and Economics*	HISTORY *A Foreign Language*	A.B.&Litt.B.

	DEPARTMENT	PREREQUISITE AND ADVISED ELECTIVE COURSES	FOR DEGREE OF
III.	*Art and Archæology*	CLASSICS OR A MODERN LANGUAGE, through year	A.B.
		LATIN OR A MODERN LANGUAGE, through year	Litt.B.
IV.	*Classics*	CLASSICS, through year	A.B.
V.	*English*	ENGLISH *A Foreign Language*	A.B.
		ENGLISH LATIN, through year *A Modern Language*	Litt.B.
VIa.	*Modern Languages Germanic Section*	GERMAN, through year	A.B.&Litt.B.
VIb.	*Modern Languages Romanic Section*	FRENCH, through year *Classics*	A.B.
		FRENCH, through year LATIN, through year	Litt.B.
VII.	*Mathematics*	MATHEMATICS, through year	A.B. & B.S.
VIII.	*Physics*	MATHEMATICS, through year *Chemistry*	A.B. & B.S.
VIIa.	*Honors Course in Mathematics and Physics*	HONORS COURSE IN MATHEMATICS AND PHYSICS, through year	A.B. & B.S.
IX.	*Chemistry*	CHEMISTRY, through year *Mathematics*	A.B. & B.S.
X.	*Geology*	CHEMISTRY, through year *A Modern Language*	A.B. & B.S.
XI.	*Biology*	CHEMISTRY, through year *A Modern Language*	A.B. & B.S.

THE JUNIOR YEAR

Each Junior must choose a Department in which to concentrate his studies, and must take all the Junior year courses of that Department, as indicated in the list of Junior courses, as well as the courses which are there stated to be cognate to that Department. Three of his five courses must, in all cases, be in the Division in which the Department chosen lies, and one course shall be outside of the

Division in which this Department lies, the remaining course being left to his free election.

A Junior admitted to the Honors Course in Mathematics and Physics, unless permitted a different choice by the Department, is to select three consecutive courses; i. e., either A. B. C., B. C. D., or C. D. E. In addition each student selects an elective (3 hours) in some other Department than the Department of Mathematics and Physics.

A Junior admitted to the Honors Course in the Classical Humanities chooses his electives in accordance with the following rule: Candidates for Honors in the Classical Humanities take four courses each term throughout Junior and Senior years—a total of sixteen courses. Four of these sixteen courses are elective, but must be chosen outside the Department of Classics. Two are free electives. The other ten courses are to be selected from the list printed in the conspectus on pages 149 and 150 in accordance with the following regulations:

From the Group	"Literature"	6 courses
" " "	"History and Politics"	2 "
" " "	"Philosophy"	1 "
" " "	"Archæology"	1 "

List of Courses of Junior Year

[The numbers prefixed to the courses in the following list refer to the description of those courses on later pages. All courses three hours a week. Five courses to be taken. First term courses have odd numbers; second term courses have even numbers.]

A. Division of Philosophy

I. *Department of Philosophy*

301, 302. History of Philosophy (H)

303. Advanced Psychology (H). 304. Logic and Scientific Method (H) or Genetic Psychology

305. Ethics (1st term)

Plato IVa. B

(*Advised elective:* 303, 304. Politics)

II. *Department of History, Politics, and Economics*
301, 302. History (H) or Roman History, IVa. F.
303. Politics (H)
304. Jurisprudence (H)
305, 306. Economics (H)
(*Advised elective:* 301, 302. History of Philosophy)

B. Division of Art and Archæology

III. *Department of Art and Archæology*
301, 302. Art and Archæology (H)
303, 304. Architecture (H)
(*Requisite cognate course:* A course in Classics (H) or a modern language through year).
(*Advised elective:* 301, 302. History of Philosophy)

C. Division of Language and Literature

IV. *Department of Classics*
313, 314. Greek
317, 318. Latin
(*Advised elective:* 301, 302. History of Philosophy)

IVa. *Honors Course in the Classical Humanities*

Literature

A. Aeschylus, Sophocles
B. Thucydides, Plato
C. Plautus or Seneca; Cicero's Letters
D. History of Latin Literature
E. Lucretius (2nd term)

History and Politics

F. Roman History

Philosophy

G. History of Philosophy (1st term)

Archæology

H. Classical Archæology (1st term)

V. *Department of English*
301, 302. English Literature (H)
303, 304. English Philology (H)

VIa. *Department of Modern Languages. Germanic Section*
301, 302. German Literature (H) (Opitz to Lessing)
303, 304. German Literature (H) (Goethe)

VIb. *Department of Modern Languages. Romanic Section*
301, 302. French (H)
305, 306. Italian (H) or 307, 308. Spanish (H)
(*Advised elective:* 317, 318. Latin)

D. Division of Mathematics and Science

VII. *Department of Mathematics*
301, 302. Mathematics
303, 304. Analytical Mechanics

VIIa. *Honors Course in Mathematics and Physics*
A. Pure Mathematics—Geometry
B. Pure Mathematics—Analysis
C. Applied Mathematics—Mechanics
D. Theoretical Physics
E. Experimental Physics

VIII. *Department of Physics*
301, 302. Physics
303, 304. Analytical Mechanics
(*Advised elective:* 301, 302. Mathematics)

IX. *Department of Chemistry*
301, 302. Chemistry (H)
303, 304. Chemistry (H)
305, 306. Quantitative Analysis
(*Advised elective:* 301, 302. Physics)

X. *Department of Geology*
301. Geology (H), and 302. Structural Geology (H)
303, 304. Mineralogy (H)
306. General Palæontology (exclusive with Mineralogy 304)
(*Requisite cognate course:* Biology through the year, or Chemistry through the year, or Graphics 203 and Geodesy 304).

XI. *Department of Biology*
301, 302. General Biology (H) (for A.B. candidates)
303, 304. Botany (H)
305. Comparative Osteology; 306. Invertebrate Zoölogy (if Biology 201, 202 has been taken)
(*Requisite cognate course:* Practical Chemistry through year)

The following Junior courses fall under Division D, but are not included in any one of the Departments of that Division:

301. Elementary Astronomy; 302. Stellar Astronomy
304. Geodesy
302. Graphics
303. Graphics
304. Graphical Statics
302. Physical Geography

The courses in the Junior year which are marked with (H) are the courses central to the Department in which a Junior must maintain a standing not below the second group in order to be a candidate for Final Special Honors.

THE SENIOR YEAR

Each Senior must continue his studies in a Department in which he has satisfied the requirements of the Junior year, and must take three courses in that Department as indicated in the list of Senior courses. Or, in case three courses are not thus indicated, three of his courses must, in all cases, be in the Division in which his Department lies.

The schedule of a Senior admitted to the Honors Course in Mathematics and Physics shall consist of three courses selected from the Honors Courses and of an additional elective (3 hours) outside the Departments of Mathematics and Physics. The three Honors Courses may be selected from those of the courses a, b, c. d, e, f of which the prerequisites have previously been taken, or from those of the courses A, B, C, D, E which have not previously been taken.

A Senior admitted to the Honors Course in the Classical Humanities chooses his electives in accordance with the regulations printed on page 147.

List of Courses of Senior Year

[All courses three hours a week. Five courses to be taken. First term courses have odd numbers; second term courses have even numbers.]

A. Division of Philosophy

I. *Department of Philosophy*

402. Philosophy (2nd term)
403. Exper. Psych. *or* Fundamental Problems of Philosophy (1st term)
404. Experimental Psychology (2nd term) (exclusive with any one of 2nd term electives in Philosophy)
405, 406. Ethics
407. Greek Philosophy (1st term)
410. History of Philosophy (2nd term)

II. *Department of History, Politics, and Economics*

401, 402. History
403, 404. History
405, 406. Politics
407, 408. Politics
412. Politics (2nd term)
409, 410. Economics
411. European Economic Policy (1st term)
414. Social Economics (2nd term)
419. Roman Law (1st term)

B. Division of Art and Archæology

III. *Department of Art and Archæology*

401, 402. Art and Archæology
405, 406. Art and Archæology
407, 408. Architecture

C. Division of Language and Literature

IV. *Department of Classics*

409, 410. Greek
411, 412. Latin
419. Roman Law, 414 Tacitus.

IVa. *Honors Course in Classical Humanities Literature*

A. Homer, Greek Lyric Poets
B. Roman Satire, Aristophanes

C. Roman Elegiac Poets, Virgil
D. Classical Influence in English Literature (2nd term)
E. Tacitus (second term)

History and Politics

F. Greek History
G. Roman Public Life. Greek Public Life
H. Roman Law (1st term)

Philosophy

I. Greek Philosophy (1st term)

Archæology

J. Greek Sculpture, Greek Architecture

V. *Department of English*
401, 402. English
403, 404. English
405, 406. English

VIa. *Department of Modern Languages. Germanic Section*
401, 402. German Literature (Nineteenth Century)
403, 404. German Literature (Middle High German)

VIb. *Department of Modern Languages. Romanic Section*
401, 402. French
403, 404. French
405, 406. French
407, 408. Italian
409, 410. Spanish

D. Division of Mathematics and Science

VII. *Department of Mathematics*
401, 402. Mathematics
403, 404. Mathematics

VIIa. *Honors Course in Mathematics and Physics*
A. Geometry or Algebra
B. Analysis
C. Applied Mathematics—Electricity and Magnetism
D. Theoretical Physics
E. Experimental Physics
F. Celestial Mechanics

VIII. *Department of Physics*
401, 402. Physics
403, 404. Physics

IX. *Department of Chemistry*
401, 402. Chemistry
403, 404. Chemistry
405, 406. Chemistry

X. *Department of Geology*
401, 402. Historical Geology
403. Structural and Dynamic Geology; 404, Economic Geology
405, 406. Invertebrate Palæontology, *or*
407. Mineralogy; 408. Petrology

XI. *Department of Biology*
401. Comparative Anatomy of Vertebrates; 402. Embryology
403. Histology. 404. Histology, *or* 406. Palæontology
407, 408. Physiology

Senior courses which are not in any one of the eleven Departments above:

401, 402. Sanskrit (*falls in Division C*)
403, 404. Biblical Literature (*falls in Division C*)
405, 406. Biblical Literature (*falls in Division C*)
403. Practical Astronomy (*falls in Division D*) (1st term)
401. Graphics (*falls in Division D*) (1st term)
403, 404. Theory of Prime Motors (*falls in Division D*)

THE PRO-SEMINARY

A pro-seminary will be established in some Departments for Seniors who are candidates for Final Special Honors (see later pages). Each pro-seminary will be in charge of a Director, who shall conduct a session of the pro-seminary at least one hour each week during the term or year.

The Director shall have charge of the admission and assignment of qualified Seniors and of the work of the pro-seminary generally. In case the pro-seminary is divided into sections, each section shall be conducted by an instruc-

tor, but the Director shall have general oversight of the pro-seminary, preside at the joint sessions of the sections, and conduct the sessions of one section.

The sessions of each pro-seminary will be devoted to the presentation and discussion of work prepared by the individual members of the pro-seminary.

METHOD OF UNDERGRADUATE INSTRUCTION

Instruction in Physics, Chemistry, Biology, and Astronomy is given, of course, not only by means of lectures and formal tests upon text books, but also by means of practical experimental work in the several laboratories and in the working observatory. In Mathematics, besides the stated class exercises and occasional lectures, certain hours are set apart each week during which the instructors of the Department are accessible for informal consultation by all students who wish further explanation or discussion of such portions of their mathematical work as most interest them or give them the most difficulty. In Geology, similarly, there is field work and constant informal resort to the geological museum, added to frequent conferences with the instructors in the several courses on the reading assigned.

Instruction in what may be called the reading Departments, Philosophy, History and Politics, Art and Archæology, and the languages is given chiefly by means of informal conferences on the reading assigned. A "course" consists, not of the lectures given in connection with it or of the study of a particular text book relied on by the lecturer, but of a prescribed body of reading to which the lectures given are supplementary. Each student is made responsible to a particular preceptor for his reading, and reports to him once a week in each course for conference. He reports to the same preceptor throughout for all his

reading in the several courses of the special Department in which he has chosen to concentrate his work, and for his reading in the courses outside his special Department to the lecturer in that course or to the instructor who has charge of its formal conduct in the class-room.

At each conference the preceptor usually meets from three to six of the men assigned him. The methods of conference differ, of course, with the character of the subject, but are always informal, being intended, not as a quiz or recitation or drill, not as a method of coaching, but, so far as the preceptor is concerned, as a means of finding out how thoroughly and intelligently the student has done his reading, and, so far as the student is concerned, as a means of stimulation and enlightenment with regard to the study in hand. His work is explained to him where it is obscure, and its scope and implications are extended out of the wider reading and maturer scholarship of the preceptor, whose real function it is to serve him as "guide, philosopher, and friend." Study centres upon these conferences, as in the scientific Departments it centres upon the laboratory. They are meant to supply to study the life which it cannot have in the formal exercises of the class-room and to bring the students into an intimate contact with their teachers which is hardly possible in other methods of instruction.

One object of this method of instruction is to lay the principal emphasis of work upon the constant reading required, upon what is ordinarily called "term work," rather than upon preparation for occasional examinations. In reckoning the "standing" of a student more weight is given to his work with his preceptor than to his performance in examination. Each preceptor is expected to report in Departmental meeting upon the work of the men assigned him, and it is only upon his recommendation that they are admitted to examination. He may recommend the ex-

clusion from examination of any of his pupils who seem to him to have neglected their work or to have done it too indifferently. He makes no formal report to any university officer of their absences from his appointed conferences or of their attendance, but forms his own estimate of their thoroughness and faithfulness and gives his judgment upon the basis of an intimate observation.

All members of the Faculty do "preceptorial" work: those who lecture or conduct the formal class exercises acting as preceptors in the reading connected with their own courses for those students who elect those courses but not the entire work of the Department within which they lie, and those who bear the special title of preceptor taking oversight of all the departmental reading of those students who elect the whole work of their Departments.

DEPARTMENT OF CIVIL ENGINEERING

The Course of Study

The course in civil engineering is designed to fit its graduates for entering the profession of civil engineering. The degree conferred at its close on successful candidates is Civil Engineer (C.E.). The regular course of study occupies four years, but applicants who are found to be suitably prepared are admitted to advanced standing. Bachelors of Arts, of Letters, or of Science of Princeton University, who, while undergraduates, have pursued suitable elective studies can ordinarily be prepared for the civil engineer's degree by a two-year's course in the technical studies required for that degree.

In arranging the course in civil engineering care has been taken to give the student the benefit of as much general training in the earlier years as the claims upon his time made by his later technical studies will permit. Accordingly, a large proportion of his time in Freshman and Sophomore years is devoted to studies which are pursued in common with candidates for the Bachelor's degree.

A very large proportion of the strictly technical studies of the course cannot be profitably pursued without a thorough previous preparation in mathematics; especial attention is therefore given in the earlier part of the course to imparting to the students in civil engineering a sound working knowledge of the ordinary divisions of that science, inclusive of analytical mechanics, and a high degree of proficiency therein is exacted from all candidates for the degree of C.E.

Great stress is also laid in this course on the study of graphics as a science as well as an art, both in its general development and in its application to the practice of designers and builders. For convenience, it has been separated into two distinct divisions, *viz.*:

A. Defined in detail under the courses entitled Graphics (under Department of Civil Engineering, on a later page), and comprising all branches of the study, including descriptive geometry and its applications, which are usually grouped under the general heading, geometrical or mechanical drawing. At its conclusion the student will have been trained to execute general and working drawings of structures, to prepare patterns or templates for the shaping of structural details, to make working and finished drawings of machines, and to trace graphically and lay out mechanical movements, such as link-and-valve motions, etc.

B. Defined in detail in the courses entitled Geodesy (under Department of Civil Engineering, on a later page), and consisting of those branches of the art which are closely associated with surveying, and generally known as map drawing or topographical drawing, the object of which is to make the student expert in the execution, in pen work and colors, of finished plans and maps of various kinds of surveys. Except in the necessary preliminary drill these drawings invariably represent actual surveys made by the different classes. A rigid adherence to field notes and a high degree of finish are exacted in their execution.

The study of surveying and engineering field work is provided for in the different subdivisions of the course of study in Geodesy (see courses in Geodesy, under Department of Civil Engineering, on a later page). The structure, adjustment, and use of each instrument are made subjects of special attention, and no student is allowed to participate in any extended field operation until he has acquired a certain dexterity in handling the instruments used therein. The instruction in geodesy extends through different kinds of surveys, in the order of their complexity, and ends in location surveys of lines of communication, staking out for construction in general, and problems of railway terminals

and yard-work. A special feature of the course in geodesy is the stress laid on the orderly collection and verification of field notes by each student, and on their appropriate use in the preparation of different kinds of plans, maps, and charts of surveys. No error is allowed in field work or in plotting which is not within the limits of observed practice.

During the two weeks immediately following the close of the second term of the Junior year, the Junior Class in civil engineering engages in the field work of extended surveys in some locality selected by the Professor of Geodesy. All regular members of the class are required to attend these exercises.

The remaining strictly technical studies of the course in civil engineering, given by name on succeeding pages, may be grouped under the headings: applied mechanics, constructions, and laboratory practice.

The first group covers a wide range of studies comprising graphical statics, theoretical and practical hydraulics, the elasticity and strength of materials, the stability and pressures of earthen masses and of foundations, the stability of block structures and of steel-concrete structures, the strength of girders and of framed structures, the theory of the draw bridge, the suspension bridge, the cantilever bridge, and of metallic arches, the general theory of motors, and the theory of water wheels, of steam engines, and gas engines. In dealing with the theories of these subjects rigid mathematical treatment is generally used, yet proper weight is given to graphical methods of analysis and the student's attention is especially directed to those problems in which such methods can be employed with advantage. The practical application of the above subjects also receives proper attention and is illustrated in some cases by drawings, in others by models, and in others by prescribed exercises in the Civil Engineering Laboratory.

The second group, namely constructions, comprises those technical studies which are largely descriptive of the planning and construction of engineering works. These subjects begin with the study of the physical properties of structural materials, with the aid of laboratory exercises, and advance to the study of the design and construction of foundations under various conditions of difficulty; to the erection of bridges and other structures, and the consideration of the auxiliaries needed therefor; to the planning and construction of water works under different conditions as to kind and quality of supply; the design and construction of sewerage and drainage systems, including modes of disposal and purification of sewage; and the construction of roads, streets, etc. Great stress is laid on the application of correct rules and principles, on the careful inspection, manipulation, and preservation of materials, and on the economic features of various designs and the modes of executing them.

The position of the third group of exercises, namely laboratory practice, in the course of study, as well as its purpose, will be inferred from the preceding explanations. (See also Civil Engineering Laboratory, on later pages.)

As one of the conditions of being recommended for the degree of Civil Engineer each candidate for the degree is required to prepare and submit for the approval of a professor, appointed in each case by the Department, a graduation thesis. This shall be a design or review of some structure, machine, or process, or a theoretical and practical examination and extension of some work or subject selected from the technical studies of the Department. The subject of the graduation thesis must be announced for approval to the professors of the Department, not later than the first Monday in March (second term, Senior year); and the thesis must be completed on or before the second Saturday preceding Commencement.

The following is a synopsis of the course in civil engineering. *All studies are required.*

The Freshman Year

First Term		*Second Term*	
English	2	English	2
Physics	4	Physics	4
Mathematics	4	Mathematics	4
Chemistry	4	Chemistry	4
Graphics	2	Geodesy	3
Geodesy	1	Hygiene	1
Hygiene	1	Physical Education	3
Physical Education	3		
Total	21	Total	21

The Sophomore Year

First Term		*Second Term*	
General Physics	3	General Physics	3
Mathematics	3	Mathematics	3
Mathematics	2	Mathematics	2
Mineralogy	3	Geology	3
Graphics	3	Graphics	3
Geodesy	3	Geodesy	3
Total	17	Total	17

The Junior Year

First Term		*Second Term*	
Analytical Mechanics	3	Analytical Mechanics	3
General Astronomy	3	Practical Astronomy	2
Graphical Statics	3	Mechanics of Materials	4
Geodesy	4	Geodesy	5
Graphics	2	Graphics	3
Materials of Construction	2		
Total	17	Total	17

The Senior Year

First Term		*Second Term*	
Framed Structures	5	Framed Structures	3
Prime Motors	3	Prime Motors	3
Hydraulics	2	Water Works	2
Graphics	2	Sewerage and Drainage	2
Geodesy	3	Roads	2
Laboratory	2	Masonry Structures	2
		Methods of Construction	2
		Laboratory	1
Total	17	Total	17

PART V

DEPARTMENTS OF THE UNIVERSITY

ACADEMIC DEPARTMENT

FACULTY

JOHN GRIER HIBBEN, PH.D., LL.D., LITT.D., *President, Stuart Professor of Philosophy.*

FRANCIS LANDEY PATTON, D.D., LL.D., *Ex-President, Stuart Professor of Ethics and the Philosophy of Religion.*

ANDREW FLEMING WEST, PH.D., LL.D., HON. D.LITT. (Oxon.), *Dean of the Graduate School, Giger Professor of Latin.*

WILLIAM FRANCIS MAGIE, PH.D., *Dean of the Faculty.*

HOWARD MCCLENAHAN, E.E., M.S., LL.D, *Dean of the College.*

THEODORE WHITEFIELD HUNT, PH.D., L.H.D., *Professor of English.*

ALLAN MARQUAND, PH.D., L.H.D., *Professor of Art and Archaeology.*

ALEXANDER THOMAS ORMOND, PH.D., LL.D., *McCosh Professor of Philosophy.*

JOHN HOWELL WESTCOTT, PH.D., *Musgrave Professor of Latin and Tutor in Roman Law.*

GEORGE MCLEAN HARPER, PH.D., *Holmes Professor of Belles Lettres and English Language and Literature.*

PAUL VAN DYKE, D.D., *Professor of History.*

HENRY VAN DYKE, D.D., LL.D., *Murray Professor of English Literature.*

GEORGE STEVENSON PATTON, A.M., *Professor of Moral Philosophy.*

HOWARD CROSBY WARREN, A.M., *Professor of Experimental Psychology.*

THOMAS MARC PARROTT, PH.D., *Professor of English.*

EDMUND YARD ROBBINS, A.M., *Ewing Professor of Greek Language and Literature.*

WILLIAMSON UPDIKE VREELAND, D. ÈS L., *Woodhull Professor of Romance Languages.*

STOCKTON AXSON, LITT.D., *Professor of English.*

JOHN HAUGHTON CONEY, A.M., *Professor of History.*

WILLIAM KELLY PRENTICE, PH.D., *Professor of Greek.*

HOWARD CROSBY BUTLER, A.M., *Professor of Art and Archaeology.*

NORMAN KEMP SMITH, D. PHIL., *Stuart Professor of Psychology.*

DUANE REED STUART, PH.D., *Professor of Classics.*
CHRISTIAN GAUSS, A.M., *Professor of Modern Languages.*
EDWARD CAPPS, PH.D., *Professor of Classics.*
FRANK FROST ABBOTT, PHD., *Kennedy Professor of Latin Language and Literature.*
HENRY JONES FORD, *Professor of Politics.*
EDWARD ELLIOTT, PH.D., *Professor of Politics.*
RUDOLPH ERNEST BRÜNNOW, PHD., *Professor of Semitic Philology.*
ROGER BRUCE CASH JOHNSON, PH.D., *Professor of Philosophy.*
ROBERT MCNUTT MCELROY, PH.D., *Edwards Professor of American History.*
FRANK JEWETT MATHER, JR., PH.D., *Marquand Professor of Art and Archaeology.*
EDWARD SAMUEL CORWIN, PH.D., *Professor of Politics.*
HARRY FRANKLIN COVINGTON, A.M., *Professor of Public Speaking and Debate.*
FRANK ALBERT FETTER, PH.D., LL.D., *Professor of Political Economy.*
DAVID MAGIE, JR., PH.D., *Professor of Classics.*
JOHN DUNCAN SPAETH, PH.D., *Professor of English.*
DOUGLAS LABAREE BUFFUM, PH.D., *Professor of Romanic Languages and Literature.*
VARNUM LANSING COLLINS, A.M., *Professor of the French Language and Literature.*
JOHN PRESTON HOSKINS, PH.D., *Professor of Germanic Languages and Literature.*
MAX FRIEDRICH BLAU, PH.D., *Professor of Germanic Languages and Literature.*
GEORGE MADISON PRIEST, PH.D., *Professor of Germanic Languages and Literature.*
EDWIN WALTER KEMMERER, PH.D., *Professor of Economics and Finance.*
GEORGE BRINTON MCCLELLAN, A.M., LL.D., *Professor of Economic History.*
WILLIAM FRANKLIN WILLOUGHBY, A.B., *McCormick Professor of Jurisprudence and Politics.*
ARCHIBALD ALLAN BOWMAN, M.A., *Professor of Logic.*
LUCIUS HOPKINS MILLER, A.M., *Assistant Professor of Biblical Instruction.*
ROYAL MEEKER, PH.D., *Assistant Professor of Political Economy.*
HENRY ROBINSON SHIPMAN, PH.D., *Assistant Professor, Preceptor in History, Politics, and Economics.*

CHARLES WORTHEN SPENCER, PH.D., *Assistant Professor, Preceptor in History, Politics, and Economics.*

JOHN WILLIAM BASORE, PH.D., *Assistant Professor, Preceptor in Classics.*

FRED LEROY HUTSON, PH.D., *Assistant Professor, William Alfred Packard Preceptor in Classics.*

GORDON HALL GEROULD, B.LITT., *Assistant Professor, John Rutherfurd Preceptor in English.*

NATHANIEL EDWARD GRIFFIN, PH.D., *Assistant Professor, Preceptor in English.*

AUGUSTUS WHITE LONG, A.M., *Assistant Professor, Preceptor in English.*

FRANCIS CHARLES MACDONALD, A.B., *Assistant Professor, Edgerstoune Preceptor in English.*

CHARLES GROSVENOR OSGOOD, PH.D., *Assistant Professor, Preceptor in English.*

ROBERT KILBURN ROOT, PH.D., *Assistant Professor, Preceptor in English.*

JACOB NEWTON BEAM, PH.D., *Assistant Professor, Preceptor in Modern Languages.*

FRANK LINLEY CRITCHLOW, PH.D., *Assistant Professor, Preceptor in Modern Languages.*

WILLIAM KOREN, A.M., *Assistant Professor, Preceptor in Modern Languages.*

HARVEY WATERMAN THAYER, PH.D., *Assistant Professor, Preceptor in Modern Languages.*

WALTER MAXWELL ADRIANCE, A.M., *Assistant Professor, Preceptor in History, Politics, and Economics.*

MORRIS WILLIAM CROLL, PH.D., *Assistant Professor, Preceptor in English.*

LOUIS WARDLAW MILES, PH.D., *Assistant Professor, Preceptor in English.*

CHARLES RUFUS MOREY, A.M., *Assistant Professor, Preceptor in Art and Archaeology.*

WILLIAM STARR MYERS, PH.D., *Assistant Professor, Robert Stockton Pyne Preceptor in History, Politics, and Economics.*

AUSTIN MORRIS HARMON, PH.D., *Assistant Professor, Preceptor in Classics.*

RÉGIS MICHAUD, Licencié ès lettres, *Assistant Professor, Preceptor in Modern Languages.*

PHILIP HOWARD FOGEL, PH.D., *Assistant Professor, Preceptor in Philosophy.*

GEORGE WASHINGTON TAPLEY WHITNEY, PH.D., *Assistant Professor, Preceptor in Philosophy.*

CHARLES WILLIAM KENNEDY, PH.D., *Assistant Professor, Robert Stockton Pyne Preceptor in English.*

DAVID ALOYSIUS MCCABE, PH.D., *Assistant Professor, Preceptor in History, Politics, and Economics.*

ERNEST ASHTON SMITH, PH.D., *Assistant Professor, Preceptor in History, Politics, and Economics.*

HARRY BROWN VAN DEVENTER, PH.D., *Assistant Professor, Preceptor in Classics.*

GEORGE WICKER ELDERKIN, PH.D., *Assistant Professor, Preceptor in Art and Archaeology.*

WILLIAM SHERWOOD FOX, PH.D., *Assistant Professor, Preceptor in Classics.*

CHARLES EUGLEY MATHEWS, PH.D., *Assistant Professor, Preceptor in Modern Languages.*

DONALD CLIVE STUART, PH.D., *Assistant Professor, Preceptor in Modern Languages.*

HAROLD HERMAN BENDER, PH.D., *Assistant Professor, Preceptor in Modern Languages.*

RADCLIFFE HEERMANCE, A.M., *Assistant Professor, Preceptor in English.*

ALLAN CHESTER JOHNSON, PH.D., *Assistant Professor, Preceptor in Classics.*

HENRY CLAY MCCOMAS, JR., PH.D., *Assistant Professor, Preceptor in Philosophy.*

CLARENCE WARD, A.M., *Lecturer on Architecture.*

HERBERT SPENCER MURCH, PH.D., *Instructor in English.*

EDGEWORTH BIRD BAXTER, A.B., *Instructor in Philosophy.*

CHARLES CHRISTOPHER MIEROW, PH.D., *Instructor in Classics.*

EARNEST CARY, PH.D., *Instructor in Classics.*

CLIFTON RUMERY HALL, A.M., *Instructor in History, Politics, and Economics.*

DONALD GRANT HERRING, A.B., *Instructor in History, Politics, and Economics.*

THOMAS JEFFERSON WERTENBAKER, PH.D., *Instructor in History, Politics, and Economics.*

FREDERICK AUGUSTUS BRAUN, PH.D., *Instructor in Modern Languages.*

DONALD BLYTHE DURHAM, PH.D., *Instructor in Classics.*
EDWIN WILLIAM FRIEND, A.M., *Instructor in Classics.*
FRANK ABBOTT MAGRUDER, PH.D., *Instructor in History, Politics, and Economics.*
THOMAS ADDIS EMMET MOSELEY, A.B., *Instructor in Modern Languages.*
ALBERT GRAHAM REID, B.A. (Oxon.), *Instructor in History, Politics, and Economics.*
RICHARD SCHELLENS, *Instructor in History, Poiltics, and Economics.*
ROBERT MAXWELL SCOON, B.A. (Oxon.), *Instructor in Classics.*
JAMES EDWARD WINSTON, A.M., *Instructor in History, Politics, and Economics.*
LINDLEY RICHARD DEAN, A.M., *Instructor in Classics.*
OSWALD WHITMAN KNAUTH, A.B., *Instructor in History, Politics, and Economics.*
WILLIAM BURT MILLEN, B.A. (Oxon.), *Instructor in History, Politics, and Economics.*
KEITH PRESTON, A.M., *Instructor in Classics.*
JOHN HOWARD REDFIELD, A.M., *Instructor in Modern Languages.*
THOMAS DECOURSEY RUTH, A.B., *Instructor in Classics.*
CORTLANDT VAN WINKLE, A.M., *Instructor in English.*

PRENTICE REEVES, A.B., *Assistant in Psychology.*

*COURSES OF INSTRUCTION

A. DIVISION OF PHILOSOPHY

I. DEPARTMENT OF PHILOSOPHY

THE PRESIDENT, EX-PRESIDENT PATTON, PROFESSORS ORMOND, G. S. PATTON, WARREN, KEMP SMITH, JOHNSON, BOWMAN, SPAULDING, FOGEL, WHITNEY, AND MC COMAS; MR. BAXTER

201. Introduction to Philosophy, with collateral reading and conferences in Logic and Ethics. Hibben: *Logic, Deductive and Inductive.* Sophomore required course, first term, 3 hours a week. Professor Bowman.

202. Introduction to Philosophy: Psychology and General Philosophy. Sophomore required course, second term, 3 hours a week. Professor Kemp Smith.

301. History of Philosophy. This course includes (1) Greek and Roman philosophy to close of pagan schools. (2) Mediaeval philosophy to fall of scholasticism and beginning of the modern era. Preceptorial reading. Junior course, first term, 3 hours a week. Prerequisite to History of Philosophy of second term, and Epistemology and Metaphyiscs of Senior year. Professor Ormond.

302. History of Philosophy. This course includes modern philosophy from Descartes to Kant. Lectures, accompanied with preceptorial reading. Junior course, second term, 3 hours a week. Prerequisite course: History of Philosophy of first term. Prere-

*Courses between 101 and 200 are for Freshmen, between 201 and 300 for Sophomores, between 301 and 400 for Juniors. and between s01 and 500 for Seniors.

quisite to Epistemology and Metaphysics. Professor Ormond.

303. Psychology. Lectures and preceptorial reading. Junior course, first term, 3 hours a week. Professor Johnson.

304*a*. Advanced Logic. The Logic of Scientific Method. Junior course, second term, 3 hours a week. Professor Spaulding.

304*b*. Genetic Psychology. Development and evolution of consciousness in man and the lower species; psychological application of the theory and laws of organic evolution. Lectures and collateral reading. Junior course, second term, 3 hours a week. Professor Warren.

305. Ethics, with particular reference to the practical problems of individual and social life. Junior course, first term, 3 hours a week. The President.

*402. Introduction to the Philosophy of Religion. Topics: The psychological and epistemological roots of religion; fundamental religious ideas; theism and its problems. Senior course, second term, 3 hours a week. Lectures and preceptorial reading. Professor Ormond.

403*a*. Experimental Psychology. Introductory course. Psychological methods, analysis of sensation, reaction, and study of the common senses. Lectures and work in the laboratory. Senior course, first term, 3 hours a week. Exclusive with 403*b*. Professor Warren.

*403*b*. Fundamental Problems of Philosophy. Discussion, historical and systematic, of the main current topics of philosophy, materialism, agnosticism, idealism. Paulsen: *Introduction to Philosophy*. Karl Pearson: *The Grammar of Science*. Previous knowledge of

* Also listed as graduate course.

technical metaphysics is not required. Senior course, first term, 3 hours a week. Exclusive with 403*a*. Prerequisite to 410. Professor Kemp Smith.

404. Experimental Psychology. Continuation of 403*a*. Special senses; space perception and illusions; higher intellectual processes. Lectures and work in the laboratory. Senior course, second term, 3 hours a week. Professor Warren.

*405. Types of Ethical Theory. Lectures on the history of ethics and types of ethical theory with collateral reading. Senior course, first term, 3 hours a week. Prerequisite to course 406. Professor George S. Patton.

*406. Fundamental Ethical Concepts. Lectures and collateral reading. Senior course, second term, 3 hours a week. Ex-President Patton and Professor George S. Patton.

*407. History of Greek Philosophy. Lectures and collateral reading. Detailed study will be made of the Pre-Socratic fragments, and of some of the chief works of Plato and Aristotle. History of Philosophy 301 should, if at all possible, be previously taken in Junior year. Senior course, first term, 3 hours a week. Professor Bowman.

*410. History of Philosophy. The origins and tendencies of Nineteenth Century thought. This course is designed as an historical introduction to the chief philosophical systems of the Nineteenth Century. Previous knowledge of technical metaphysics is not required. Senior course, second term, 3 hours a week. Professor Kemp Smith.

THE PRO-SEMINARY IN PHILOSOPHY. In charge of the Department. Reading in modern philosophy with

* Also listed as graduate course.

theses. Topics will be assigned in accordance with the wants of the student.

For graduate courses in Philosophy, see Department of the Graduate School, pages 229 to 231.

II. DEPARTMENT OF HISTORY, POLITICS, AND ECONOMICS.

PROFESSORS PAUL VAN DYKE, CONEY, WESTCOTT, FORD, ELLIOTT, MC ELROY, CORWIN, FETTER, KEMMERER, MC CLELLAN, WILLOUGHBY, MEEKER, SHIPMAN, SPENCER, ADRIANCE, MYERS, MC CABE, AND E. A. SMITH; DR. WERTENBAKER, MR. HERRING, MR. HALL, DR. MAGRUDER, MR. REID, MR. SCHELLENS, MR. WINSTON, MR. KNAUTH, AND MR. MILLEN

202. Mediaeval History; 400 A.D.—1404 A.D. Sophomore elective, second term, 3 hours a week. Prerequisite to the history courses in Junior and Senior years. One lecture weekly by Professor Paul van Dyke, and two recitations weekly in small divisions, the recitations being conducted by Professors Paul van Dyke, Coney, McElroy, and others. (This course is to precede and be continuous with History 301 and 302.)

301. European History; 1494 A.D.—1789 A.D. Lectures and required reading. Junior course, first term, 3 hours a week. Prerequisite course: History 202. Professor Coney.

302. European History; 1789 A.D.—1878 A.D. Lectures and required reading. Junior course, second term, 3 hours a week. Prerequisite course: History 202. Professor Coney.

303. Constitutional Government. The genesis, nature, and operation of constitutional government, with especial reference to the political institutions of England and the United States. W. Wilson: *The State;* Lowe: *Governance of England;* A. V. Dicey: *The Law of the Constitution;* W. Wilson: *Constitutional Government.* Junior course, first term, 3 hours a week. Professor Willoughby.

304. Elements of Jurisprudence. Outlines of jurisprudence. An exposition of jurisprudence as an organic whole, exhibiting the nature of its subject-matter, its relationship to cognate branches of study, the inter-relationship of its several parts to each other, and their proper function and aim. Lectures and collateral reading. T. E. Holland: *Elements of Jurisprudence;* Sir H. S. Maine: *Ancient Law;* and E. Jenks: *Law and Politics in the Middle Ages.* Junior course, second term, 3 hours a week. Professor Willoughby.

305, 306. Elements of Economics. This course will comprise the essential elements of the abstract theory of economics and some of the applications and exemplifications of the theory, such as money, banking, transportation, international trade, and monopoly problems. There will be one lecture a week, and two recitations in small groups to test the student's apprehension of the subject matter covered in the reading. Fetter: *Principles of Economics,* and collateral readings. Junior course, both terms, 3 hours a week. Prerequisite course: History 202. Prerequisite to Public Finance and Money and Banking. Professor Fetter and Professor Meeker.

401, 402. Modern English History from the accession of the Tudor Dynasty to the Electoral Reforms of the

Nineteenth Century. The lectures in this course are given twice weekly by Professor Paul van Dyke. Lectures, collateral reading and tests. Senior course, both terms, 3 hours a week. Prerequisite course: History 202. Professor Paul van Dyke.

403. American History to the Fall of the Federalist Party. An account of the discovery of the continent, the growth of colonial institutions, the development of concerted action among the colonies, and the establishment of the federal government. Lectures dealing with selected topics; text-book covering the entire period; and extensive collateral reading. Senior course, first term, 3 hours a week. Prerequisite course: History 202. Professor McElroy.

404. American History since the Fall of the Federalist Party. An account of the development and expansion of the United States. Lectures dealing with selected topics; text-book covering the entire period; and extensive collateral reading. Senior course, second term, 3 hours a week. Prerequisite course: History 202. Professor McElroy.

405. Politics. Federal and State Government. An examination of the way in which public policy is formulated and the public business is carried on in the United States, tracing the divergence from English procedure and comparing existing methods with those of other self-governing countries. Lectures and collateral reading. Senior course, first term, 3 hours a week. Prerequisite course: Constitutional Government 303. Professor Ford.

406. Politics. Municipal Government in the United States and other countries. Senior course, second term, 3 hours a week. Prerequisite course: Politics 405. Professor Ford.

407. Politics. International Law. A discussion of the general principles with their application to some current and disputed questions. Lawrence: *Principles of International Law;* Scott: *Cases on International Law.* Senior course, first term, 3 hours a week. Professor Corwin [in 1912-1913.]

408. Politics. The Theory of the State. Hobbes: *Leviathan;* Locke: *On Civil Government;* Rousseau: *The Social Contract;* Lowell: *Essays on Government;* Wilson: *An Old Master and other Political Essays;* Willoughby: *The Nature of the State.* Only selected portions of these books will be required. Senior course, second term, 3 hours a week. Professor Elliott [not given 1912-1913.]

412. Politics. History of Constitutional Interpretation in the United States. A study of the development of the leading doctrines of American Constitutional Law, principally by judicial decision. Lectures, cases, collateral reading. Senior course, second term, 3 hours a week. Professor Corwin.

409. Economics. Public Finance. This course will cover the theory of public finance. Lectures with weekly conferences. Daniels: *Public Finance,* and Means: *Methods of Taxation,* with collateral reading in Bullock: *Selected Readings in Public Finance.* Senior course, first term, 3 hours a week. Prerequisite courses: History 202 and Economics 305, 306. Professor Kemmerer.

410. Economics. Money and Banking. This course is designed to outline briefly the problems touching money and banking. Johnson: *Money and Banking;* Kemmerer: *Money and Prices;* Fiske: *Modern Bank.* Senior course, second term, 3 hours a week. Prerequisite courses: History 202 and Economics 305 and 306. Professor Kemmerer.

411. Economics. European Economic Policy in the 19th century. An account of some of the important political events in Europe since 1815, in connection with social conditions and industrial changes. Senior course, first term, 3 hours a week. Prerequisite courses: History 202 and Economics 305 and 306. Professor McClellan.

414. Social Economics. A study of the principles and methods now being applied in bettering physical and moral conditions of industrial life and in the prevention and treatment of crime and dependency. Lectures, with collateral readings, visits to industrial and philanthropic institutions in the vicinity, and reports and conferences on assigned problems. Senior course, second term, 3 hours a week. Prerequisite courses: History 202 and Economics 305 and 306. Professor Fetter.

*419. (Classics 419.) Roman Law. The History and Institutes of Roman Law. Sohm: *Institutes of Roman Law,* English translation. Leage: *Roman Private Law.* For those students who take the subject as part of the Honors Course in Classical Humanities, and for others, if they so desire, the preceptorial work will be in the *Institutes of Justinian.* Senior course, first term, 3 hours a week. Professor Westcott.

For Honors courses in the Classical Humanities which may be substituted for regular courses in this Department see under the Department of Classics.

THE PRO-SEMINARY. In the Department of History, Politics and Economics, a pro-seminary is conducted both terms, and is divided into sections, one

* Also listed as graduate course.

for history, one for politics and one for economics. Admission to the pro-seminary is conditioned upon a student's obtaining in the Junior year courses of the Department the standing prescribed for entrance upon pro-seminary work. Professor E. A. Smith is the general director of the pro-seminary.

For the year 1912-1913, the Section of History offers the following subjects: (1) The rise and growth of English Political Parties. First term. Professor Smith. (2) Southern Colonial History. First term. Dr. Wertenbaker. (3) English History in the 19th century. Second term. Professor Shipman. (4) The American Revolution. Second term. Professor Spencer.

The Section of Politics offers the following subject: Constitutional law. First term. Professor Corwin.

The Section of Economics offers the following subjects: (1) Business accounting. First term. Professor Adriance. (2) Labor organizations and labor problems. Second term. Professor McCabe.

For graduate courses in History, Politics, and Economics, see Department of the Graduate School, pp. 232 to 237.

B. DIVISION OF ART AND ARCHÆOLOGY

III. DEPARTMENT OF ART AND ARCHÆOLOGY

PROFESSORS MARQUAND, BUTLER, MATHER, MOREY AND ELDERKIN; MR. WARD.

301. Ancient Art. A general outline of the history of ancient sculpture, painting, and the minor arts. Lectures and required reading. Reference books: Maspero: *Egyptian Archæology;* Babelon: *Oriental Antiquities;* Fowler and Wheeler: *Greek Archæology.* Junior course, first term, 3 hours a week. Professors Morey and Elderkin.

302. Mediaeval Art. A general outline of the history of Early Christian, Byzantine, Romanesque, and Gothic sculpture, painting, and the minor arts. Lectures and required reading. Junior course, second term, 3 hours a week. Professors Morey and Mather.

303. Ancient Architecture. A course in the history of Egyptian, Assyrian, Persian, Greek, and Roman architecture. Two hours of lectures and one of historical drawing. Reference books: Hamlin: *History of Architecture;* Sturgis: *European Architecture.* Junior course, first term, 3 hours a week. Prerequisite to 407, 408, Elements of Architecture. Professors Butler, Morey and Elderkin.

304. Mediaeval Architecture. The history of Early Christian, Byzantine, Romanesque, and Gothic architecture. Two hours of lectures and one of historical drawing. Reference books: Porter: *Mediaeval Architecture;* Moore: *Gothic Architecture.* Junior course, second term, 3 hours a week. Prerequisite course: Ancient Architecture 303. Mr. Ward and Professor Morey.

*401. Greek Sculpture. A study of the technique, forms, composition, and history of Greek sculpture. Lectures and required reading. Gardner: *Handbook of Greek Sculpture.* Senior course, first term, 3 hours a week. Prerequisite course: Ancient Art 301. Professors Marquand and Elderkin.

*402. Italian Sculpture. A general survey of the history of Italian sculpture through the Renaissance period. Lectures and required reading. Senior course, second term, 3 hours a week. Prerequisite course: one of the Junior courses in Art and Archæology. Professors Marquand and Morey.

*405. The Revival of Painting in Italy. An outline history of painting in Italy from Cavallini to Michelangelo, with especial regard to the Florentine School. Wölfflin's *Art of the Renaissance* will be used, and the development of style in painting will be associated with the corresponding changes in culture. Senior course, first term, 3 hours a week. Prerequisite course, one of the Junior courses in Art and Archæology. Professors Mather and Morey.

*406. Northern Painting. Especial attention will be given to the Flemish school, but the chief painters of the German and Dutch schools will also be studied. Senior course, second term, 3 hours a week. Professor Mather.

*407, 408. Elements of Architecture. The classic orders of ancient and Renaissance architecture, studied in their historical development, from reproductions of the ancient monuments, from the text of Vitruvius, and from the works of Vignola and Palladio. This course includes drawing to scale, with shades and shadows, and exercises in historical design. Ware:

* Also listed as graduate course.

The American Vignola. Senior course, both terms. 3 hours a week. Prerequisite course: Ancient Architecture 303. Mr. Ward and Professor Morey.

For graduate courses in Art and Archæology, see Department of the Graduate School, pp. 238 to 240.

C. DIVISION OF LANGUAGE AND LITERATURE

IV. DEPARTMENT OF CLASSICS

DEAN WEST, PROFESSORS WESTCOTT, ROBBINS, PRENTICE, CAPPS, STUART, ABBOTT, DAVID MAGIE, JR., BASORE, HUTSON, HARMON, VAN DEVENTER, FOX, AND JOHNSON; DR. CARY, DR. MIEROW, DR. DURHAM, MR. FRIEND, MR. SCOON, MR. DEAN, MR. PRESTON, AND MR. RUTH

FRESHMAN AND SOPHOMORE YEARS

101. Lysias, Plato's Apology, and Greek History. The first half of the term will be devoted to reading selected speeches of Lysias, to the study of Greek History, and to a review of Greek Grammar. This review will be based partly on the text, partly on exercises in Greek prose composition. During the second half of the term Plato's Apology of Socrates will be read. The emphasis of the study will be laid upon the thought rather than upon the language. Freshman course, required for the degree of A.B., first term, 4 hours a week. Professors Stuart, Hutson, Harmon, Fox, and Johnson; Dr. Mierow, Dr. Cary, Dr. Durham, Mr. Friend, Mr. Scoon, Mr. Dean, Mr. Preston, and Mr. Ruth.

102. Herodotus and Homer. The first half of the term: Herodotus and Greek History; the second half of the term: selected portions of the Odyssey. Attention will be given to Ionic forms and to the special features of syntax and style of Herodotus and the Odyssey. Freshman course, required for the degree of A.B., second term, 4 hours a week. Professors Hutson, Harmon, Fox, and Johnson; Dr. Cary, Dr. Durham, and Mr. Friend.

103. Sallust, Livy, Latin Prose Composition, and Roman

History. Sallust's *Catiline* and the greater part of the first and a large part of the twenty-first and twenty-second books of Livy will be studied both as history and as Latin, one-quarter of the time being devoted to exercises in prose composition or to Roman History. Scudder: *Sallust, Catiline;* Westcott: *Livy, Books, i, xxi, and xxii;* Abbott: *A Short History of Rome.* Freshman course, required of all candidates for the degrees of A.B., Litt.B., and B.S., first term, 4 hours a week. Professors Westcott, David Magie, Jr., Basore, Van Deventer, and Johnson; Dr. Mierow, Dr. Cary, Dr. Durham, Mr. Friend, Mr. Scoon, Mr. Dean, Mr. Preston, and Mr. Ruth.

104. Roman Comedy. Most of the time will be devoted to the study of selected comedies of Plautus and Terence. Freshman course, required of all candidates for the degrees of A.B., Litt.B., and B.S., second term, 4 hours a week. Professors Westcott, Stuart, David Magie, Jr., Basore, Harmon, Van Deventer, Fox, and Johnson; Dr. Mierow, Dr. Cary, Dr. Durham, Mr. Friend, Mr. Scoon, Mr. Dean, Mr. Preston, and Mr. Ruth.

201. Greek Drama: Aristophanes and Euripides. Selected plays. Lectures on the development of the drama, on the presentation of plays, on the authors and their works. Sophomore course, required of candidates for the degree of A.B., first term, 3 hours a week. Professors Robbins, Hutson and Van Deventer.

202. Lucian. Selected dialogues, illustrative of the life and thought of the second century A.D. Brief account of the later Greek literature. Sophomore course, elective for candidates for the degree of A.B., second term, 3 hours a week. Professor Harmon.

203. Sophomore Elective Latin. Reading of prose literature of the Silver Age, as represented in Tacitus

and Pliny the Younger, with incidental study of the political and social life of their time. Tacitus: *Agricola* and *Germania;* Pliny: *Letters.* Sophomore course, elective for A.B., required alternative for Litt.B., and B.S., first term, 3 hours a week. Professors Stuart, David Magie, Jr., and Basore; and Mr. Jones.

204. Horace and Catullus. Horace: *Odes* and *Satires;* Catullus: *Selections.* Sophomore course, required for A.B., required alternative for Litt.B. and B.S., second term, 3 hours a week. Dean West, Professors Van Deventer and Fox; Dr. Mierow, Dr. Cary, Dr. Durham, Mr. Friend, Mr. Scoon, Mr. Dean, Mr. Preston, and Mr. Ruth.

JUNIOR AND SENIOR YEARS

Honors Course in the Classical Humanities

The instruction of the Junior and Senior years is organized so as to constitute the Honors Course in the Classical Humanities.

The purpose of the Honors Course is not philological or scientific, but literary, historical, political, artistic and philosophical. The aim is to make clear through lectures, preceptorial conferences, and intimate personal work in the Pro-seminary the fundamentally valuable lessons of antiquity for modern thought and life. The reading of selected masterpieces of the ancient writers, with abundant help given to the student in the way of explanation and criticism, is a necessary part of the course. The student in this reading will be guided as closely as possible along the line of his special aptitudes and desires. So far as practicable, the members of the Honors Course are assigned for their reading and conferences to instructors of their own choice. Certain parts of the reading will be slow and critical, but it is also intended to develop the practice of fluent

and copious reading, particularly in the fields of history and literature.

The general regulations for the Honors Course are printed below. While the complete range of electives offered is naturally open only to those who have studied both Greek and Latin, a sufficient number of electives is provided for those who have studied Latin only. Accordingly the candidates for Honors will be placed in two sections, the properly Classical section and the Latin section.

General Regulations

1. Candidates for the degree of Bachelor of Arts or Bachelor of Letters, who have completed the Sophomore year with an average standing in their Classical courses not lower than the third group, may enter the Honors Course in the Classical Humanities at the beginning of Junior year as candidates for Honors, or if they do not enter the Honors Course, may in the Junior and Senior years take electives from the list offered for honors.

2. Candidates for the degree of Bachelor of Arts or Bachelor of Letters, who have completed the Sophomore year with an average standing in their Classical courses lower than the third group, are restricted in their choice of Classical electives to the list indicated on page 148.

Members of the Honors Course are also members of the Classical Pro-seminary throughout the Junior and Senior years.

3. Candidates for Honors in the Classical Humanities take four courses throughout the Junior and Senior years,—a total of sixteen courses. Four of these courses are electives, but must be chosen outside of the Department of Classics. Two are free electives. The other ten courses are to be selected from the list printed in the "Conspectus" on pp. 149, 150 in accordance with the following regulations: From the group "Greek and Latin Literature" six courses; from the group "History and Politics" two courses;

from the group "Philosophy" one course; from the group "Archæology" one course.

4. Students in the Honors Course in Classical Humanities shall not be credited with more than four courses and a pro-seminary in any term. Courses in addition to these may be taken only by express consent of the Departmental Committee on the Honors Course, and shall be recorded only as optional courses not counting towards a degree.

5. Students who fail to maintain a satisfactory standing in the studies of the Honors Course will be required to leave the Honors Course and to choose their studies under the general plan.

6. At the end of Junior year a student may withdraw from the Honors Course and choose his studies under the general plan.

7. Those who satisfactorily complete the Honors Course will receive honors in the Classical Humanities with such grades of distinction as are now recognized.

8. Juniors and Seniors who were qualified at the end of Sophomore year to become members of the Honors Course in the Classical Humanities, but who have become members of other departments, may choose one or more electives out of the list offered for Honors in the Classical Humanities and, so far as permitted by the regulations of the Faculty, may substitute the same for one or more of their departmental electives.

N. B. Juniors and Seniors who are not entitled to be enrolled in the Honors Course are restricted in their choice of Classical electives to the following list:

JUNIOR COURSES

First Term—Aeschylus 313, Latin Literature 317.
Second Term—Sophocles 314, Latin Literature 318.

SENIOR COURSES

First Term—Homer 409, Latin Elegiac Poets 411, Roman Law 419
Second Term—Greek Lyric Poets 410, Virgil 412, Tacitus 414.

CONSPECTUS OF COURSES

Ten courses from the following list are to be selected during the Junior and Senior years. Six of these ten must be in Greek and Latin Literature, two in History and Politics, and one each in Philosophy and Archæology. See Regulations, p. 147.

SUBJECTS	JUNIOR YEAR	
	First Term	Second Term
Greek and Latin Literature	Aeschylus (313) Prentice	Sophocles (314) Prentice
	Thucydides (307) Capps	Plato (304) Hutson
	Plautus (315) Harmon	
	Latin Literature of the Republic (317) VanDeventer	Latin Literature of the Empire (318) Magie
		Lucretius (302) Basore
		Cicero's Leters (308) Abbott
History and Politics	Roman History (305) Westcott	Roman History (306) Westcott
Philosophy	History of Philosophy (301) Ormond	
Archæology	Classical Archæology (309) Elderkin	

CONSPECTUS OF COURSES [CONTINUED].

SUBJECTS	SENIOR YEAR	
	FIRST TERM	SECOND TERM
GREEK AND LATIN LITERATURE	Homer (409) Robbins	Lyric Poets (410) Capps
		Aristophanes (418) Robbins
	Elegiac Poetry (411) Stuart	Virgil (412) Stuart
		Classical Influence in English Literature (416) Osgood
	Roman Satire (415) Johnson	Tacitus (414) Westcott
HISTORY AND POLITICS	Greek History (403) Prentice	Greek History (404) Prentice
	Roman Public Life (405) Magie	Greek Public Life (406) Fox
	Roman Law (419) Westcott	
PHILOSOPHY	Greek Philosophy (407) Bowman	
ARCHÆOLOGY	Greek Sculpture (401) Marquand	Greek Architecture (408) Butler

DESCRIPTIVE LIST OF JUNIOR AND SENIOR ELECTIVES

301. (Philosophy 301.) History of Philosophy. This course includes, (1) Greek and Roman philosophy to close of pagan schools. (2) Mediaeval philosophy to fall of scholasticism and beginning of the modern era. Preceptorial reading. Junior course, first term,

3 hours a week. Prerequisite to History of Philosophy of second term, and Epistemology and Metaphysics of Senior year. Professor Ormond.

302. Lucretius. Criticism and interpretation of the *De Rerum Natura,* with emphasis upon the philosophic content. A survey of the Epicurean system of Lucretius will be given by the translation of selected books, analyses of those not read, and lectures. Junior course, second term, 3 hours a week. Professor Basore. (May count, for those qualified for the Honors Course in the Classical Humanities, as a course in Philosophy.)

304. Plato. One or more short dialogues entire, with substantial portions of others: Protagoras, Phaedo, Phaedrus, Gorgias, Republic. Study of form, style, and philosophic content. Junior course, second term, 3 hours a week. Professor Hutson. (May count, for those qualified for the Honors Course in the Classical Humanities, as a course in Philosophy.)

305. Roman History. Roman History to the beginning of the Empire. The constitution of the primitive Roman state; the development of the social, political, and legal institutions of the Republic, the foreign conquests and civil wars. Special topics, as they are encountered, will be studied and results embodied in written reports. The preceptorial work will consist of reading in Latin or Greek historians. Junior course, first term, 3 hours a week. Professor Westcott. (May count, for those qualified for the Honors Course in the Classical Humanities, as a course in History.)

306. Roman History. Roman History from the beginning of the Empire to the age of Justinian. The constitution of the empire, and its changes; the devel-

opment of universal Roman law and cosmopolitan society; provincial administration; the rise of Christianity; the barbarian invasions and the beginnings of the nations of modern Europe. Junior course, second term, 3 hours a week. Professor Westcott. (May count, for those qualified for the Honors Course in the Classical Humanities, as a course in History.)

307. Thucydides. The Sicilian Expedition. The sixth and seventh books of Thucydides will be read and the campaign studied in its historical, military, and political aspects. Junior course, first term, 3 hours a week. Professor Capps.

308. Letters of Cicero. Attention will be given especially to Cicero's correspondence with his personal and literary friends for the light which it throws on his character, his tastes, his literary interests, and the condition of society in his day. Junior course, second term, 3 hours a week. Professor Abbott.

309. (Art and Archaeology 301.) Ancient Art. A general outline of the history of ancient sculpture, painting, and the minor arts. Lectures and required reading. Reference books: Maspero: *Egyptian Archaeology;* Babelon: *Oriental Antiquities;* Fowler and Wheeler: *Greek Archaeology.* Junior course, first term, 3 hours a week. Professors Morey and Elderkin.

313. Aeschylus. One play will be translated and interpreted in detail, and its literary qualities, dramatic construction and stage-setting will be discussed. The other extant plays will be read, either in the original or in translations, and their plots and character discussed. Lectures will be given on the Greek Theatre, on Aeschylus, and on contemporary poets and dramatists. Junior course, first term, 3 hours a week. Professor Prentice.

314. Sophocles. One or more plays will be translated, and their literary qualities, dramatic construction and stage-setting discussed. As far as possible these plays will also be read metrically. The other extant plays will be read, either in the original or in translations, and their plots and character discussed; also modern productions of these plays, and modern plays on the same subjects. Lectures will be given on the myths involved in these plays, and on Sophocles' life and works. Junior course, second term, 3 hours a week. Professor Prentice.

315. Plautus. Four plays will be taken up. In studying the first two special attention will be given to the language and style of Plautus and to the rendering of his verse. In reading the other two the construction of the plot, the portrayal of character, costumes, stage-setting, and modern adaptations of the plays of Plautus will be the main subjects of study. Junior course, first term, 3 hours a week. Professor Harmon.

317. Latin Literature of the Republic. Study of the development of the Latin language, the national character, the several literary forms, and Greek influence. Assigned reading chiefly from Ennius, Plautus, Terence, Cato, Lucilius, Lucretius, Varro, Cicero, Sallust, and Catullus. Junior course, first term, 3 hours a week. Professor Van Deventer.

318. Roman Literature of the Empire. One lecture, two recitations weekly. The lectures will give a general survey of the history of Roman Literature from Augustus to Marcus Aurelius. The other hours will be devoted to the study of representative works of this period, the purpose, construction, and literary qualities of which will be discussed by the students.

Junior course, second term, 3 hours a week. Professor David Magie, Jr.

*401. (Art and Archæology 401.) Greek Sculpture. A study of the technique, forms, composition, and history of Greek sculpture. Lectures and required reading. Gardner: *Handbook of Greek Sculpture.* Senior course, first term, 3 hours a week. Prerequisite course: Junior course in Classical Archæology. Professors Marquand and Elderkin.

403, 404. Greek History. Lectures will be given on Greek History, from the earliest times to the Roman conquest, and on the methods, scope and results of historical criticism. Collateral reading will be assigned in Bury's *History of Greece.* Portions of the works of Greek historians will be read in the original, and their testimony analyzed and compared. Senior course, both terms, 3 hours a week. Professor Prentice. (May count, for those qualified for the Honors course in Classical Humanities, as a course in History.)

405. Roman Public Life. The course will deal historically and topically with the magistracies, the senate, the popular assemblies, the courts, and with provincial administration. Frequent comparisons will be made with modern political institutions. The work, which will be adapted to students of Latin and of Political Science, will consist of lectures, reading, and the discussion of papers prepared by the members of the class. Senior course, first term, 3 hours a week. Professor David Magie, Jr. (May count, for those qualified for the Honors Course in Classical Humanities, as a course in Politics.)

406. Greek Public Life. A study of the political experiments of the Greek states and of the theories of the

* Also listed as graduate course.

state formulated by the Greek political philosophers. The readings in Greek authors will be selected to illustrate the topics discussed in the lectures; but Aristotle's Constitution of Athens will form the basis. Senior course, second term, 3 hours a week. Professor Fox. (May count, for those qualified for the Honors Course in the Classical Humanities, as a course in Politics.)

*407 (Philosophy 407.) History of Greek Philosophy. Lectures and collateral reading. The following works will be read in the preceptorial conferences: The Pre-Socratic fragments, selected dialogues of Plato, the De Anima, the Nicomachean Ethics and parts of the Metaphysics of Aristotle. Senior course, first term, 3 hours a week. Professor Bowman.

*408. (Art and Archæology 408.) Greek Architecture. The classic orders of ancient architecture, studied in their historical development, from reproductions of the ancient monuments, from the text of Vitruvius, and from the works of Vignola and Palladio. This course includes drawing to scale, with shades and shadows, and exercises in historical design. Ware: *The American Vignola.* Senior course, second term, 3 hours a week. Prerequisite course: Junior course in Ancient Architecture. Mr. Ward and Professor Morey.

409. Homer. Reading of selections from the Iliad and the Odyssey. Lectures on Greek epic poetry, and on the language and problems of the Homeric poems. Senior course, first term, 3 hours a week. Professor Robbins.

410. Lyric Poets. Survey of Greek poetic literature from Homer to Theocritus. Lectures and discussions; select readings, especially from the lyric poets; individ-

* Also listed as graduate course.

ual work with theses. Senior course, second term, 3 hours a week. Professor Capps.

411. Roman Elegiac Poets. Lectures on the history of the elegy; reading of the poems of Tibullus and Propertius and of selections from the Amores of Ovid. Senior course, first term, 3 hours a week. Professor Stuart.

412. Virgil. A study of the literary methods and poetic art of Virgil; reading and discussion of the Eclogues and of selected books of the Aeneid; illustrative lectures and occasional critical interpretations. Senior course, second term, 3 hours a week. Professor Stuart.

414. Tacitus. Reading of the annals and histories of Tacitus, with special attention to the author's style as a writer and his aims and methods as an historian. Senior course, second term, 3 hours a week. Professor Westcott.

415. Roman Satire. This course will deal mainly with the Satires of Horace and with Persius. In reading Horace the construction of his Satires and his philosophy of life will be specially studied. In the work upon Persius the class will consider particularly the poet's attitude as a moralist and his literary indebtedness to Horace. Senior course, first term, 3 hours a week. Professor Johnson.

416. Classical Influence in English Literature. The quality of English Literature as variously determined by the influence of the classics; the spirit of the classics as manifest in the form and the content of English Literature. Readings in such authors as Aeschylus, Plato, Theocritus, Bion, Moschus, Virgil, Horace; Spenser, Milton, Pope, Shelley, Tennyson. Senior course, second term, 3 hours a week. Professor Os-

good. (May count, for those qualified for the Honors Course in the Classical Humanities, as a course in English.)

418. Aristophanes. Selected plays. Introduction to the study of the Old Comedy. Senior course, second term, 3 hours a week. Professor Robbins.

*419. (Hist., Pol. and Econ. 419.) Roman Law. The history and institutes of Roman private law. Sohm: *Institutes of Roman Law,* English translation. Leage: *Roman Private Law.* The preceptorial work for students in the Department of Classics will be in the Institutes of Justinian or of Gaius. Senior course, first term, 3 hours a week. Professor Westcott.

The Pro-seminary

The Classical Pro-seminary extends through the Junior and Senior years. It is in charge of a committee which attends to the admission and assignment of students, and exercises general supervision over all the work of the Pro-seminary. Each section holds a weekly session of at least one hour for the presentation and discussion of work based on the reading and study of classical writers. The aim of the Pro-seminary is to furnish each member of it an opportunity to work for himself and by himself—under regular guidance,—on some considerable portion of his main subject of study.

The Pro-seminary constitutes the supplementary and more flexible part of the Honors Course. The aim of the Pro-seminary in the Junior year will be chiefly to enlarge the range of the student's reading in Greek and Latin writers; in the Senior year to

* Also listed as graduate course.

develop his powers of independent thinking and his critical faculties.

For graduate courses in Classics, see Department of the Graduate School, pp. 241 to 251.

V. DEPARTMENT OF ENGLISH

PROFESSORS HUNT, HENRY VAN DYKE, HARPER, PARROTT, AXSON, COVINGTON, SPAETH, GEROULD, GRIFFIN, LONG, MAC DONALD, OSGOOD, ROOT, CROLL, MILES, KENNEDY AND HEERMANCE; DR. MURCH AND MR. VAN WINKLE.

101, 102, *a*. Selected English authors, for special study and for general reading. The principles of composition and rhetoric will be derived therefrom. Frequent reports on assigned reading. Freshman required course, both terms, 2 hours a week for A.B., Litt.B., B.S., and C.E. Freshmen. Professor Covington, assisted by the English Preceptors and Instructors.

101, 102, *b*. To Freshmen who enter the Cliosophic or the American Whig Society there is offered, as a substitute for 101, 102, *a*, an elective course in Public Speaking and Debate. Freshman course, both terms, 2 hours a week for A.B., Litt.B., B.S., and C.E. Freshmen. Professor Covington, assisted by Professor Kennedy in the American Whig Society and Professor Heermance in the Cliosophic Society.

201. Outline Sketch of English Literature. A brief survey of English literature from earliest times to the Victorian Age. Occasional lectures; oral and written recitations; reports on required reading. The reading

in this course is designed to illustrate the various periods in the history of English literature. Sophomore elective, first term, 3 hours a week. Prerequisite to the choice of the English Department in Junior year. Professors Parrott and Axson, assisted by Professor Covington, the English Preceptors and Instructors.

301. English Literature: The Sixteenth Century. The revival of learning, the Reformation, the national awakening under the Tudors, and the influence of Italy, in their effect upon English letters. Spenser, Sidney, and Marlowe will be studied. Attention will be paid to the history of the drama and of lyric poetry, and to the narrative of Elizabethan voyagers. Junior course, first term, 3 hours a week. Professor Harper.

302. English Literature: Shakespeare. A study of some of Shakespeare's representative plays. Reference books: Dowden: *Shakespeare, His Mind and Art;* Boas: *Shakespeare and His Predecessors.* Junior course, second term, 3 hours a week. Professor Harper.

303. History of the English Language. Lectures on the history, vocabulary, and structure of the English Language. Emerson: *English Language;* Whitney: *Life and Growth of Language;* Skeat: *Piers, the Plowman.* Junior course, first term, 3 hours a week. Prerequisite to English 304. Professor Hunt.

304. Elementary Old English. A grammatical and phonological study of Old English, with readings mainly from Old English prose literature. Smith: *Old English Grammar;* Bright: *Anglo-Saxon Reader.* Junior course, second term, 3 hours a week. Prerequisite course: English 303. Prerequisite to English 405. Professor Hunt.

*401. Restoration and Eighteenth Century Literature. Discussion of leading poets and prose writers from Dryden to Burns, with especial emphasis on the rise of the Romantic school. Senior course, first term, 3 hours a week. Professor Axson.

402. Seventeenth Century Literature. Lectures on the poets and prose writers during the age of Milton. The assigned reading will include the larger part of Milton's poetry, his *Areopagitica,* his *Letter on Education,* Browne's *Religio Medici,* Walton's *Compleat Angler,* and selections from the Cavalier poets. Senior course, second term, 3 hours a week. Professor Harper.

*403. English Poetry of the Nineteenth Century. A study of some of the leading British and American poets of the period. Senior course, first term, 3 hours a week. Professor Henry van Dyke.

*404. English Prose of the Nineteenth Century. A literary study of the chief prose-writers of the Romantic and Victorian eras. Senior course, second term, 3 hours a week. Professor Axson.

Note. The order of courses 403 and 404 is reversed in successive years, and the professors in charge alternate. The arrangement for 1912-13 is as here stated, but in 1913-14 the course in Prose will be given in the first term by Professor Henry van Dyke, and the course in poetry will be given in the second term by Professor Axson.

*405. Advanced Old English. Selections, mainly poetical, from Old English Literature will be read, under direction of the professor in charge and the preceptors, two hours a week. One hour a week will be devoted to lectures by the professor in charge on historical and

* Also listed as graduate course.

critical topics. Bright's *Anglo-Saxon Reader* and Wyatt's *Beowulf* will be the basis for selections. A thesis will be required. Senior course, first term, 3 hours a week. Prerequisite course: English 304. Professor Hunt.

406. Chaucer and his Contemporaries. Lectures on Chaucer, his period, his language, and his contemporaries. The reading will include the greater part of Chaucer's poetry, together with selections from Langland, Gower, Wyclif, and the author of *Sir Gawaine and the Green Knight*. A thesis of considerable length, embodying the results of independent investigation, conducted under the guidance of the preceptors, will be required of every student. One hour a week will be devoted to lectures and two hours a week to preceptorial conferences. Skeat: *Student's Chaucer;* Skeat: *Piers the Plowman*. A handbook dealing with the period will also be used. Senior course, second term, 3 hours a week. Professors Parrott and Root.

Classics 416 may be elected as a course in English by those qualified for the Honors Course in the Classical Humanities (page 156).

THE PRO-SEMINARY in English will be conducted during both terms under the direction of Professor Griffin. This pro-seminary will be divided into several sections according to the needs of its members, each section to be in the charge of one of the professors or preceptors. Opportunity will be given to study the language and literature of the earlier periods, and various aspects of the later literature.

For graduate courses in English, see Department of the Graduate School, pages 252 to 256.

VI. DEPARTMENT OF MODERN LANGUAGES

PROFESSORS VREELAND, GAUSS, BUFFUM, COLLINS, HOSKINS, BLAU, PRIEST, CRITCHLOW, KOREN, THAYER, MICHAUD, BEAM, MATHEWS, STUART, AND BENDER; DR. BRAUN, MR. MOSELEY, AND MR. REDFIELD

GERMANIC SECTION

101, 102. Beginners' German. Grammar, reading, and composition. Freshman course, both terms, 3 hours a week. Professors Beam and Hoskins.

103, 104. German Prose and Poetry. Reading of selected works with drill in grammar and exercises in composition. Freshman course, both terms, 2 hours a week for A.B. Freshmen; 3 hours a week for Litt.B. and B.S. Freshmen. Prerequisite course: Entrance German A. Prerequisite to Sophomore German. Professor Bender and Dr. Braun.

105, 106. German. Reading of historical, descriptive, and narrative prose, with exercises in composition. Texts are selected to form a general introduction to the study of modern German life and letters. Open to Freshmen who have entered on German B. Both terms, 3 hours a week. Either German 105, 106 or 203, 204 is prerequisite to the German courses of Junior and Senior years. Professor Thayer.

201, 202. Beginners' German. Grammar, reading, and composition. Sophomore elective course, both terms, 3 hours a week. Professors Beam and Hoskins.

203, 204. Sophomore German. An introduction to German literature of the eighteenth and nineteenth centuries. Reading of selected works; collateral reading. Sophomore elective course, both terms, 3 hours a week. Prerequisite course: German 103, 104, or

entrance German B. Either German 203, 204, or 105, 106 is prerequisite to the German courses of Junior and Senior years. Professors Priest and Thayer.

301, 302. German Literature from Opitz to Schiller. First term: selected works of Wieland and Lessing will be read and interpreted in the class; collateral reading in both German and English; lectures on German literature from Opitz to Lessing's death. Second term: selected works of Schiller; collateral reading in both German and English; lectures on German literature from Lessing's death to Schiller's death. Reference books: Scherer's, Robertson's and Francke's histories of German literature. Junior course, both terms, 3 hours a week. Prerequisite course: German 105, 106 or 203, 204. Professor Hoskins.

303, 304. Goethe's Life and Works. Lectures and reading. Götz von Berlichingen, Werthers Leiden, Iphigenie, Tasso, Hermann und Dorothea, Faust, Gedichte, Dichtung und Wahrheit, with collateral reading. Reference books: English and German works on Goethe's life and on Faust. Junior course, both terms, 3 hours a week. Prerequisite course: German 105, 106 or 203, 204. Professor Blau.

401, 402. The Romantic School in Germany and German Literature since Goethe's death. This course comprises the reading of selected works, lectures, and collateral reading. Senior course, both terms, 3 hours a week. Prerequisite course: German 105, 106 or 203, 204. Professor Beam.

403, 404. Middle High German. Elements of Middle High German grammar. Readings in mediaeval German epic poetry in the first term, and in the epic and lyric poetry of the same period in the second term. Senior course, both terms, 3 hours a week. Prerequisite

course: German 105, 106 or 203, 204. Professor Priest.

THE MODERN LANGUAGE PRO-SEMINARY, open to qualified Seniors, is in charge of Professor Vreeland.

ROMANIC SECTION

101, 102. Beginners' French. Grammar, composition, and reading. Aldrich and Foster: *Grammar*. Freshman course, both terms, 3 hours a week. Professors Collins and Mathews, and Mr. Moseley.

103, 104. Freshman French. This course consists of reading and practical exercises in French syntax and composition, and collateral reading. Freshman course, both terms, 2 hours a week for A.B. Freshmen, 3 hours a week for Litt.B. and B.S. Freshmen. Prerequisite course: Entrance French A. Prerequisite to Sophomore French. Professors Buffum, Collins, Critchlow, and Mathews; and Mr. Moseley.

201, 202. Beginners' French. Grammar, composition, and reading. Aldrich and Foster: *Grammar*. Sophomore elective, both terms, 3 hours a week. Professors Collins and Mathews, and Mr. Moseley.

203, 204. Sophomore French. General introduction to the study of French literature. This course consists of a general survey of French literature, based on textbooks, with a study of representative works of different periods. Sophomore elective, both terms, 3 hours a week. Prerequisite course: French 103, 104, or Entrance French B. Prerequisite to French 301, 302; 401, 402, 403, 404, 405, 406. Professors Vreeland, Stuart, Critchlow, and Mathews.

301, 302. French. The French literature of the seventeenth century. Special attention is given to the

development of the drama and to the general characteristics of the age of Louis XIV. The course also includes a general view of the first half of the eighteenth century and selections from Le Sage, Marivaux, and Voltaire. Junior course, both terms, 3 hours a week. Prerequisite course: French 203, 204. Professors Koren and Collins.

305. Italian. Grammar, composition, and reading. Grandgent: *Italian Grammar.* Junior course, first term, 3 hours a week. Prerequisite to Italian 306. Professor Koren.

306. Italian. Reading of the Inferno of Dante. Scartazzini: *La Divina Commedia di Dante Alighieri.* Junior course, second term, 3 hours a week. Prerequisite course: Italian 305. Prerequisite to Italian 405. Professor Gauss.

307, 308. Spanish. Grammar, composition, and reading from modern Spanish authors. Junior course, both terms, 3 hours a week. Prerequisite to Spanish 407, 408. Mr. Redfield and Professor Critchlow.

401, 402. French. The Romantic Movement. A general view of French literature from Rousseau to contemporary writers, with particular attention to the generation of 1830; the gradual transformation of the earlier Romanticism; the Parnassian school of poetry; the realistic novel; Taine and later criticism. Recitations and reports, with occasional lectures. Senior course, both terms, 3 hours a week. Prerequisite course: French 203, 204. Professor Gauss.

403, 404. Old French. A study of the language and literature of France from its origin to the Renaissance. This course consists of a general survey of the history of the language, and of the extensive reading of texts with special attention to their literary side. Senior

course, both terms, 3 hours a week. Prerequisite course: French 203, 204. Professor Buffum.

405. French Literature of the Eighteenth Century. This course includes a general survey of French literature from 1715 to the end of the eighteenth century, with a special study of Voltaire's relations to his times, the Encyclopédie, Diderot, J. J. Rousseau, and the new literature after him. Senior course, first term, 3 hours a week. Prerequisite course: French 203, 204. Professor Michaud.

406. French Literature of the Sixteenth Century. This course is based on an extensive reading of selections from the Sixteenth century French prose and poetry, with special attention given to Montaigne, Rabelais, and the Pléiade. It includes also a study of the Renaissance in France, and of the beginnings of Classicism. Senior course, second term, 3 hours a week. Prerequisite course: French 203, 204. Professor Michaud.

407. Italian. Readings in the Purgatorio and the Paradiso of Dante. Scartazzini: *La Divina Commedia di Dante Alighieri.* The course will include also a study of the precursors of Dante. Recitations and lectures. Senior course, first term, 3 hours a week. Prerequisite course, Italian 306. Prerequisite to Italian 408. Professor Gauss.

408. Italian. Reading of selections from Petrarch, Boccaccio, and authors of the Fifteenth and Sixteenth Centuries. Lectures on the Italian literature from the time of Dante. Senior course, second term, 3 hours a week. Prerequisite course: Italian 407. Professor Koren.

409. Spanish. General survey of Spanish literature and extensive readings from modern Spanish authors.

Senior course, first term, 3 hours a week. Prerequisite courses: Spanish 307, 308. Prerequisite to Spanish 410. Mr. Redfield.

410. Spanish. Spanish literature of the Golden Age and readings from Cervantes, Calderón, and Lope de Vega. Senior course, second term, 3 hours a week. Prerequisite courses: Spanish 307, 308, 409. Mr. Redfield.

THE MODERN LANGUAGE PRO-SEMINARY, open to qualified Seniors, is in charge of Professor Vreeland.

For graduate courses in Modern Languages, see the Department of the Graduate School, pp. 256 to 263.

COURSES NOT INCLUDED IN ANY OF THE PRECEDING DEPARTMENTS

*401, 402. Sanskrit. Senior course, both terms, 3 hours a week. Professor Robbins. (This course falls in Division C.)

403, 404. Biblical Literature. Old Testament Literature. Origin, development, nature and content of the literature of the Old Testament. First term: General introductory lectures upon religion and the Bible, followed by a study of the pre-Exilic Old Testament literature. Required reading: Several pre-Exilic Old Testament Writings: Dods: *The Bible, Its Nature and Origin;* Addis: *The Hebrew Religion;* Kent: *History of the Hebrew People* (*United Kingdom and Divided Kingdom.*) Second term: The Exilic and post-Exilic Old Testament literature. Required reading: Several Exilic and post-Exilic Old Testament Writings; Sabatier: *Philosophy of Religion;* Cornill: *The Prophets of Israel;* Kent: *History of the Hebrew People* (*Babylonian, Persian and Greek Periods*). This course, while dealing primarily with the literature of the Old Testament, includes a thorough discussion, in preceptorial hours, of the nature and significance of Christianity. Lectures and preceptorial work. Senior course, both terms, 3 hours a week. Professor Miller. (This course falls in Division C.)

405, 406. Biblical literature. New Testament Literature. Origin, development, nature and content of the literature of the New Testament. First term: General introductory lectures upon religion and the Bible, followed by a study of the four Gospels, the life of Christ, and the nature of Christianity. Required reading: the Gospels; Dods: *The Bible, Its Nature*

* Also listed as graduate course.

and Origin; Mathews: *New Testament Times;* Rhees: *Life of Jesus of Nazareth;* Percy Gardner: *An Historical View of the New Testament.* Second term: Introductory lectures and study of the Pauline and post-Pauline New Testament literature. Required reading: the remaining New Testament books; Sabatier: *Philosophy of Religion;* Ropes: *Apostolic Age;* Bruce: *St. Paul's Conception of Christianity.* Lectures and preceptorial work. Senior course, both terms, 3 hours a week. Professor Miller. (This course falls in Division C.)

JOHN C. GREEN SCHOOL OF SCIENCE

FACULTY

JOHN GRIER HIBBEN, PH.D., LL.D., LITT.D., *President.*

ANDREW FLEMING WEST, PH.D., LL.D., HON. D. LITT. (Oxon.), *Dean of the Graduate School.*

HENRY BURCHARD FINE, PH.D., LL.D., *Dean of the Departments of Science, Dod Professor of Mathematics.*

WILLIAM FRANCIS MAGIE, PH.D., *Dean of the Faculty, Henry Professor of Physics.*

HOWARD MCCLENAHAN, E.E., M.S., LL.D., *Dean of the College, Professor of Physics.*

CHARLES MCMILLAN, A.M., C.E., *Professor of Civil Engineering.*

WILLIAM LIBBEY, D.SC., *Professor of Physical Geography.*

WILLIAM BERRYMAN SCOTT, PH.D., LL.D., *Blair Professor of Geology.*

FREDERICK NEWTON WILLSON, A.M., C.E., *Professor of Graphics.*

LEROY WILEY MCCAY, D.SC., *Professor of Chemistry.*

HENRY DALLAS THOMPSON, D.SC., PH.D., *Professor of Mathematics.*

HERBERT STEARNS SQUIER SMITH, C.E., *Professor of Civil Engineering.*

WALTER BUTLER HARRIS, C.E., *Professor of Geodesy.*

ELMER HOWARD LOOMIS, PH.D., SC.D., *Professor of Physics.*

WALTER MEAD RANKIN, PH.D., *Professor of Biology.*

CHARLES FREEMAN WILLIAMS MCCLURE, D.SC., *Class of 1877 Professor of Zoölogy.*

ALEXANDER HAMILTON PHILLIPS, D.SC., *Professor of Mineralogy.*

FRED NEHER, A.M., *Professor of Chemistry.*

CHARLES HENRY SMYTH, JR., PH.D., *Professor of Geology.*

OWEN WILLANS RICHARDSON, M.A., D.SC., *Professor of Physics.*

AUGUSTUS TROWBRIDGE, PH.D., *Professor of Physics.*

EDWIN GRANT CONKLIN, PH.D., SC.D., *Professor of Biology.*

MALCOLM MACLAREN, E.E., A.M., *Professor of Electrical Engineering.*

EDWIN PLIMPTON ADAMS, PH.D., *Professor of Physics.*

LUTHER PFAHLER EISENHART, PH.D., *Professor of Mathematics.*
GEORGE AUGUSTUS HULETT, PH.D., *Professor of Physical Chemistry.*
WILLIAM FOSTER, PH.D., *Professor of Chemistry.*
OSWALD VEBLEN, PH.D., *Professor of Mathematics.*
ULRIC DAHLGREN, M.S., *Professor of Biology.*
WILLIAM GILLESPIE, PH.D., *Professor of Mathematics.*
JOSEPH EDWARD RAYCROFT, A.B., M.D., *Professor of Hygiene and Physical Education, Director of the Department of Physical Education.*
HENRY NORRIS RUSSELL, PH.D., *Professor of Astronomy.*
CLAUDE SILBERT HUDSON, PH.D., *Acting Professor of Physical Chemistry.*
MARCUS STULTS FARR, D.SC., *Assistant Professor, Preceptor in Geology.*
HEREWARD LESTER COOKE, M.A., *Assistant Professor of Physics.*
PHILIP ELY ROBINSON, PH.D., *Assistant Professor of Physics.*
RAYMOND SMITH DUGAN, PH.D., *Assistant Professor of Astronomy.*
JOHN GALE HUN, PH.D., *Assistant Professor, Preceptor in Mathematics.*
CHARLES RANALD MACINNES, PH.D., *Assistant Professor, Preceptor in Mathematics.*
GILBERT VAN INGEN, *Assistant Professor of Geology.*
ELIJAH SWIFT, PH.D., *Assistant Professor, Preceptor in Mathematics.*
JOSEPH HENRY MACLAGEN WEDDERBURN, D.SC., *Assistant Professor, Preceptor in Mathematics.*
EDWIN FITCH NORTHRUP, PH.D., *Assistant Professor of Physics.*
DONALD PRITCHARD SMITH, PH.D., *Assistant Professor of Chemistry.*
JOHN STOUT VAN NEST, PH.D., *Assistant Professor of Chemistry.*
EDWIN FAUVER, A.B., M.D., *Assistant Professor of Hygiene and Physical Education.*
FREDERICK WILLIAM LUEHRING, PH.M., *Assistant Professor of Hygiene and Physical Education.*

STEWART PATON, M.D., *Lecturer on Biology.*

EDWARD CHARLES MCWILLIAMS, B.S., *Instructor in Graphics.*
CHARLES FREDERICK SILVESTER, *Assistant in Anatomy.*
WILLIAM JOHN SINCLAIR, PH.D., *Instructor in Geology.*
LOUIS SERLE DEDERICK, PH.D., *Instructor in Mathematics.*

JOHN WENTWORTH AYMAR, JR., C.E., *Instructor in Graphics.*
LEWIS ROBINSON CARY, PH.D., *Instructor in Biology.*
VERNON ANDREW SUYDAM, B.S., *Instructor in Physics.*
PERCY REEVES BICKFORD, C.E., *Instructor in Civil Engineering.*
EDMUND NEWTON HARVEY, PH.D., *Instructor in Physiology.*
EDWARD ADDISON STEVENS, B.S., *Instructor in Physics.*
JAMES WADDELL ALEXANDER, II, A.M., *Instructor in Mathematics.*
JOHN RENSHAW CARSON, E.E., M.S., *Instructor in Electrical Engineering and Physics.*
PERCY NOYES EDWARDS, C.E., *Instructor in Geodesy.*
RAY EDWIN GILMAN, A.B., *Instructor in Mathematics.*
JOHN GRIFFEN PENNYPACKER, C.E., *Instructor in Civil Engineering.*
CHARLES IRVING PLACE, C.E., *Instructor in Geodesy.*
EDWARD STAPLES SMITH, M.E., M.S., *Instructor in Mathematics.*
KEITH KUENZI SMITH, A.B., *Instructor in Physics.*
CHARLES HURLBUT STERRETT, C.E., *Instructor in Geodesy.*

JOHN INSLEY BLAIR VAIL, B.S., *Assistant in Chemistry.*
JULIAN KALFUS DALE, A.B., *Assistant in Chemistry.*
HERBERT LESLIE SAWYER, A.B., *Assistant in Chemistry.*
JULIAN HUNTLEY CAPPS, A.B., *Assistant in Chemistry.*
NELSON CLARK DALE, A.M., *Assistant in Geology.*
ALBERT SHERMAN EASTMAN, M.S., *Assistant in Chemistry.*
BYRON CASSIUS GOSS, A.B., *Assistant in Chemistry.*
HARLEY NATHAN GOULD, A.B., *Assistant in Biology.*
ALBERT EATON JENNINGS, JR., B.S., *Assistant in Chemistry.*
CARL WEAVER MITMAN, A.B., E.M., *Assistant in Mineralogy.*
HARRISON OAKS PARKER, A.B., *Assistant in Chemistry.*
ARTHUR ANDRÉ SWANSON, M.S., *Assistant in Chemistry.*
EDWARD HOWLAND WARDWELL, B.S., *Assistant in Biology.*

D. DIVISION OF MATHEMATICS AND SCIENCE

VII. DEPARTMENT OF MATHEMATICS

DEAN FINE, PROFESSORS THOMPSON, EISENHART, VEBLEN, GILLESPIE, HUN, MAC INNES, SWIFT, AND WEDDERBURN; DR. DEDERICK, MR. ALEXANDER, MR. GILMAN, AND MR. SMITH.

101. Plane Trigonometry. Hun and MacInnes: *Elements of Plane and Spherical Trigonometry.* Required of all Freshmen who have not taken the subject for entrance. Half of first term, 4 hours a week. Professor Gillespie, Mr. Gilman, and Mr. Smith.

103. Selected portions of Algebra: Undetermined Coefficients, Division Transformation, Partial Fractions, Elementary Theory of Equations, Permutations and Combinations; Review of Plane Trigonometry; Elements of Spherical Trigonometry. Fine: *College Algebra;* Hun and MacInnes: *Elements of Plane and Spherical Trigonometry.* Required of all C.E. Freshmen. All of first term, 4 hours a week. Professor Swift.

105. Selected portions of Algebra. Division Transformation, Permutations and Combinations, Determinants, and Elementary Theory of Equations. Fine: *College Algebra.* Required of all Freshmen who have not taken Plane Trigonometry for entrance. Half of first term, 4 hours a week. Professors Gillespie and Swift; Mr. Gilman, and Mr. Smith.

107. Selected portions of Algebra. Undetermined Coefficients, Division Transformation, Partial Fractions, Elementary Theory of Equations, Permutations and Combinations, and Determinants; Review of Plane Trigonometry. Fine: *College Algebra;* Hun and Mac-

Innes: *Elements of Plane and Spherical Trigonometry.* Required of all A.B., Litt.B., and B.S. Freshmen who have taken Plane Trigonometry for entrance. All of first term, 4 hours a week. Professors Hun, MacInnes, and Wedderburn; Dr. Dederick, and Mr. Alexander.

108. Coördinate Geometry, treated from the Cartesian standpoint. Fine and Thompson: *Coördinate Geometry.* Required of all Freshmen. All second term, 4 hours a week. Professors Thompson, Gillespie, Hun, MacInnes, Swift, and Wedderburn; Dr. Dederick, Mr. Alexander, Mr. Gilman, and Mr. Smith.

201, 202. Calculus. Elective course, open to all Sophomores who are candidates for a Bachelor's degree, both terms, 3 hours a week. Prerequisite to the Departments of Mathematics and Physics. Professors Gillespie and MacInnes; Dr. Dederick.

203, 204. Calculus. (See Department of Civil Engineering.)

205. Geometry, a course supplementary to course 108. Required of all C.E. Sophomores, first term, 2 hours a week. Professor Thompson.

206. Analytical Mechanics. Introductory course. Required of all C.E. Sophomores, second term, 2 hours a week. Professors Gillespie, Wedderburn, and Hun.

301, 302. Analytic Solid Geometry, and Elementary Differential Equations. Junior course, both terms, 3 hours a week. Professor Thompson.

303, 304. (Physics 303, 304.) Analytical Mechanics. The general principles of mechanics; the statics and dynamics of particles and rigid bodies. Lectures. Junior course, both terms, 3 hours a week. Prerequisite courses: Mathematics 201, 202. Professor Gillespie.

305, 306. Analytical Mechanics. Required of all C. E.

Juniors, both terms, 3 hours a week. Professors Gillespie and MacInnes.

401, 402. Advanced Calculus and Higher Algebra. Elementary course introductory to the notions and methods of modern mathematical analysis. Lectures. Senior course, both terms, 3 hours a week. Prerequisite to the graduate courses in mathematics and astronomy. Professor Eisenhart.

403, 404. (Physics 403, 404.) Theoretical Physics. A course in the mathematical theory of electricity and magnetism J. J. Thomson: *Electricity and Magnetism.* Lectures. Senior course, both terms, 3 hours a week. Prerequisite courses: Mathematics 201, 202. Professor Cooke.

HONORS COURSES IN MATHEMATICS*

Candidates for a Bachelor's degree, who have been ranked in Freshman year in the first or second group in mathematics, may enter as candidates for honors in mathematics and physics at the beginning of Sophomore year. Other candidates from the same class may be admitted on recommendation of the Department of Mathematics.

The Department of Mathematics offers, in conjunction with the Department of Physics, the following courses, which are open to candidates for honors in mathematics and physics:

205, 206. Honors course in Calculus: Differential and Integral Calculus. Differentiation of algebraic and elementary transcendental functions. Integration. Applications of differentiation including maxima and minima. Partial differentiation. Definite integrals. Geometrical and physical applications. Special curves. Curvature. Envelopes. Infinite series and Taylor's

* For Honors Course in Celestial Mechanics, see p. 194.

theorem. Sophomore course, both terms, 4 hours a week. Prerequisite to the honors courses of Junior year. Professor Eisenhart.

305, 306, *A*. Honors course in Pure Mathematics: Geometry. Coördinate Geometry. The general equation of the second degree. Diameters and polars. Metric properties of conics. Coördinate Systems in Space. Transformation of coördinates. The general equation of the second degree and the classification of quadrics. Centers, conjugate diameters, and plane sections of quadrics. Generating lines. General properties of twisted curves and surfaces. Junior course, both terms, 3 hours a week. Prerequisite to Pure Mathematics, 407, 408, *a*. Professor Thompson.

307, 308, *B*. Honors course in Analysis: Differential Equations. Equations of the first order and linear equations with constant coefficients. Singular solutions. Linear equations of the second order. Equations of Legendre, Bessel, and Riccati. Functions of Legendre and Bessel. Hypergeometric series. Equations with more than one dependent variable. Introduction to partial differential equations and calculus of variations. Higher Integral Calculus. Special integrals, including Beta and Gamma functions, and elliptic integrals, approximate evaluation of definite integrals. Volume and surface integrals. Mean value and probability. Fourier's series. Junior course, both terms, 3 hours a week. Prerequisite to Analysis 409, 410, *b*. Professors Wedderburn and Swift.

309, 310, *C*. Honors course in Applied Mathematics: Analytical Mechanics. (Physics 309, 310, *C*.) Mechanics. Kinematics. Laws of motion. Statics of particles and rigid bodies. Center of gravity. Work and energy. Stability and instability. Motion of parti-

cles under constant and variable forces. Orbits. Motion of rigid bodies. Generalized coördinates and Lagrange's equations. Small oscillations. Junior course, both terms, 3 hours a week. Prerequisite to Applied Mechanics 411, 412, *c*. Professor Veblen.

*407, 408, *a*. Honors course in Pure Mathematics. Geometry or Algebra.

Projective Geometry. The postulates of synthetic projective geometry. The relation of analytic to synthetic geometry. The principle of duality. Projectivity of one-dimensional forms. Elementary configurations. Conic sections and quadric surfaces. Linear congruences and complexes. Collineations in the plane and in space. Real and imaginary elements in geometry. Senior course, both terms, 3 hours a week. Prerequisite course: Pure Mathematics, 305, 306, *A*. Professor Veblen. [1913-1914.]

Algebra. Theory of Equations. Determinants. Linear dependence. Linear transformations. Matrices. Quadratic and bilinear forms. Elementary divisors. Factorization of polynominals. Professor Veblen. [1912-1913.]

The courses in Projective Geometry and Algebra are given in alternate years.

*409, 410, *b*. Honors course in Analysis: Theory of Functions of a Complex Variable. Representation of the complex variable on the plane and sphere. The linear fractional function. Monogenic functions. Operations with infinite series and products. The exponential, logarithmic and trigonometric functions. Conformal mapping. Cauchy's theorem. Taylor's and Laurent's series. Singular points. Residues. The fundamental theorem of algebra. The evaluation of definite integrals. Periods of integrals. Inverse func-

* Also listed as graduate course.

tions. Simple algebraic functions and their representation on Riemann surfaces. Weierstrass' factor theorem. Analytic continuation. Introduction to elliptic functions. Senior course, both terms, 3 hours a week. Professor Swift.

*411, 412, *c*. (Physics 411, 412, *c*.) Honors course in Applied Mathematics: Electricity and Magnetism. Theory of the potential and of lines and tubes of force. The principles of electrostatics. The electrostatic field. System of charged conductors. Dielectrics. Special problems of electrostatics. Currents of electricity and linear conductors. The flow of electricity in solid conductors and in dielectrics. The principles of magnetism. Induced magnetism. Terrestrial magnetism. The magnetic field produced by electric currents. Induction in linear circuits. The general equations of the electromagnetic field. Electromagnetic waves and the electromagnetic theory of light. The motion of electrons. Senior course, both terms, 3 hours a week. Prerequisite course: Applied Mathematics 309, 310, *C*. Professor Adams.

For graduate courses in Mathematics, see Department of the Graduate School, pages 264-266.

VIII. DEPARTMENT OF PHYSICS

DEAN MAGIE, PROFESSOR LOOMIS, DEAN MC CLENAHAN, PROFESSORS RICHARDSON, TROWBRIDGE, ADAMS, ROBINSON, COOKE, AND NORTHRUP; MR. SUYDAM, MR. STEVENS, MR. K. K. SMITH, MR. CARSON, MR. EVES, AND MR. KIEFER

101, 102. General Physics. General course in physics, including lectures, recitation, and laboratory work.

* Also listed as graduate course.

Crew: *General Physics.* Freshman course, for all C.E. Freshmen, and for Litt.B. and B.S. Freshmen who do not take the alternative course in General Chemistry (Chemistry 103, 104). Both terms, 4 hours a week. For this course a fee of $5 is charged and a deposit on apparatus of $5 is required. Professors McClenahan, Trowbridge, Cooke, and Northrup; Mr. Suydam, Mr. Stevens, Mr. K. K. Smith, Mr. Carson, Mr. Eves, and Mr. Kiefer.

201, 202. General Physics. General course in physics, including lectures, recitation, and laboratory work. Crew: *General Physics.* Sophomore course, for all A.B. Sophomores and for Litt.B. and B.S. Sophomores who do not take General Physics in Freshmen year. Both terms, 4 hours a week. For this course a fee of $5 is charged, and a deposit on apparatus of $5 is required. Professors Trowbridge, McClenahan, Cooke, and Northrup; Mr. Suydam, Mr. Stevens, Mr. K. K. Smith, Mr. Carson, Mr. Eves, and Mr. Kiefer.

203, 204. Heat, and Electricity and Magnetism. Lectures based on experimental demonstrations. Frequent written recitations. Edser: *Heat;* Hadley: *Magnetism and Electricity.* Sophomore course, elective for Litt.B. and B.S. Sophomores who have taken General Physics in Freshman year. Both terms, 3 hours a week. Professor Loomis.

205, 206. Heat, and Electricity and Magnetism. Lectures based on experimental demonstrations. Frequent written recitations. Edser: *Heat;* Hadley: *Magnetism and Electricity.* Sophomore course, required of C.E. Sophomores. Both terms, 3 hours a week. Professor Loomis.

301, 302. Experimental Physics. A course in experimental physics, with lectures and laboratory work. Miller:

Laboratory Physics. Reference books: Stewart and Gee; Millikan. Junior course, both terms, 3 hours a week. Professors Loomis and Robinson.

303, 304. (Mathematics 303, 304.) Analytical Mechanics. The general principles of mechanics; the statics and dynamics of particles, rigid bodies, and fluids. Lectures. Junior course, both terms, 3 hours a week. Prerequisite course, Mathematics 201, 202. Professor Gillespie.

401, 402. Theoretical Physics. A course in the elementary mathematical theories of heat and light. Poynting and Thomson: *Heat;* Edser: *Light.* Lectures. Senior course, both terms, 3 hours a week. Prerequisite course: Mathematics 201, 202. Professors W. F. Magie and Robinson.

403, 404. (Mathematics 403, 404.) Theoretical Physics. A course in the mathematical theory of electricity and magnetism. J. J. Thomson: *Electricity and Magnetism.* Lectures. Senior course, both terms, 3 hours a week. Prerequisite course: Mathematics 201, 202. Professor Cooke.

HONORS COURSES IN PHYSICS*

The Department of Physics offers, in conjunction with the Department of Mathematics, the following courses, which are open to candidates for honors in mathematics and physics:

207, 208. Honors course in General Physics. Mechanics, including kinematics, statics, and dynamics. Hydrostatics. Properties of matter. Sound. Heat. Geometrical optics. Magnetism and electricity. Sophomore course, both terms, 3 hours a week. Those

* For Honors Course in Celestial Mechanics, see p. 194.

taking this course do not take Physics 201, 202. Professor W. F. Magie.

309, 310. *C.* (Mathematics 309, 310, *C.*) Honors course in Analytical Mechanics. Mechanics. Kinematics. Laws of motion. Statics of particles and rigid bodies. Centre of gravity. Work and energy. Stability and instability. Motion of particles under constant and variable forces. Orbits. Motion of rigid bodies. Generalized coördinates and Lagrange's equations. Small oscillations. Junior course, both terms, 3 hours a week. Professor Eisenhart.

311, 312, *D.* Honors course in General Physics.

a. Electricity and Magnetism. The Electric Current. Resistance. Electromotive Force. Electrolysis Batteries. The Principles of Electrical Measurements. The Electric Field. Electrostatic instruments. The Phenomena of Discharge. Magnetisms. The Systems of Electric and Magnetic Units.

b. Physical Optics. Elementary discussion of the undulatory theory. Interference, Young's and Fresnel's experiments. Diffraction. Applications to the theory of optical instruments. Double refraction and polarization. Simple cases of effect of crystal plates. Rotary polarization. Dispersion and absorption. Spectrum analysis. Junior course, both terms, 3 hours a week. Professor Trowbridge.

313, 314, *E.* Experimental Physics. Experiments in mechanics, properties of matter, sound, heat, and light. Junior course, both terms, 3 hours a week. Professors Loomis and Robinson.

*411, 412, *c.* (Mathematics 411, 412, *c.*) Theory of Electricity and Magnetism. Theory of the potential and of lines and tubes of force. The principles of electrostatics. The electrostatic field. System of charged

* Also listed as graduate course.

conductors. Dielectrics. Special problems of electrostatics. Currents of electricity in linear conductors. The flow of electricity in solid conductors and in dielectrics. The principles of magnetism. Induced magnetism. Terrestrial magnetism. The magnetic field produced by electric currents. Induction in linear circuits. The general equations of the electromagnetic field. Electromagnetic waves and the electromagnetic theory of light. The motion of electrons. Senior course, both terms, 3 hours a week. Professor Adams.

*413, 414, *d*. Theoretical Physics.

a. Thermodynamics. The classical theories of Clausius and Lord Kelvin. Gibbs' theory of thermodynamic equilibrium. Applications to homogeneous bodies, to the ideal gas, and to solutions.

b. Electrical Properties of Gases. The kinetic theory of gases. Conduction of Electricity through gases. Properties of the ions. Thermionics. The Roentgen Rays. Radioactivity. Ionization by collisions and spark discharge. Senior course, both terms, 3 hours a week. Professors W. F. Magie and Richardson.

*415, 416, *e*. Experimental Physics. Experiments in electricity and magnetism. Lectures on electrical measurements. Special problems involving exercise in the experimental methods used in research. Senior course, both terms, 3 hours a week. Professor Cooke.

For graduate courses in Physics, see Department of the Graduate School, pages 267 to 269.

* Also listed as graduate course.

IX. DEPARTMENT OF CHEMISTRY

PROFESSORS MC CAY, NEHER, HULETT, FOSTER, HUDSON, SMITH, AND VAN NEST; MR. CAPPS, MR. DALE, MR. EASTMAN, MR. GOSS, MR. JENNINGS, MR. PARKER, MR. SAWYER, MR. SWANSON, AND MR. VAIL.

101, 102. General Inorganic Chemistry. Experimental lectures on the elements and their compounds, supplemented by laboratory work. Two lectures, one recitation, and one laboratory exercise of 3 hours each week. Smith: *General Chemistry for Colleges.* Required for C.E. Freshmen, both terms, 4 hours a week. Professor Van Nest, assisted by Mr. Dale and Mr. Capps.

103, 104. General Inorganic Chemistry. Experimental lectures on the elements and their compounds, supplemented by laboratory work. Two lectures, one recitation, and one laboratory exercise of 3 hours each week. The laboratory work is in part introductory to qualitative analysis. Smith: *General Chemistry for Colleges.* Freshman course, elective for Litt.B. and B.S., alternative to Physics 101, 102. Both terms, 4 hours a week. Prerequisite to all later courses in chemistry and mineralogy and to the Departments of Chemistry, Biology, and Geology. Professor Foster, assisted by Mr. Capps, Mr. Dale, Mr. Eastman, Mr. Goss, Mr. Jennings, Mr. Parker, Mr. Sawyer, Mr. Swanson, and Mr. Vail.

201, 202. General Inorganic Chemistry. Experimental lectures on the elements and their compounds, supplemented by laboratory work. Two lectures, one recitation, and one laboratory exercise of 3 hours each week. The laboratory work is in part introductory to qualitative analysis. Smith: *General Chemistry*

for Colleges. Sophomore elective, both terms, 4 hours a week. The lectures of this course, supplemented by special laboratory and conference work, may be substituted for Sophomore Honors Physics. (See p. 180.) Prerequisite to all later courses in chemistry and mineralogy and to the Departments of Chemistry, Biology, and Geology. Professor Foster, assisted by Mr. Capps, Mr. Dale, Mr. Eastman, Mr. Goss, Mr. Jennings, Mr. Parker, Mr. Sawyer, Mr. Swanson, and Mr. Vail.

301. Historical and Theoretical Chemistry. Lectures and written recitations. Smith: *Inorganic Chemistry;* Dobbin and Walker: *Chemical Theory;* Ostwald: *Outlines of Theoretical Chemistry.* Junior course, first term, 3 hours a week. Prerequisite course: General Inorganic Chemistry. Required in the Department of Chemistry. Professor McCay.

302. Organic Chemistry. Introductory course devoted to the study of the properties, relationships, synthesis, and structure of the more important classes of acyclic compounds. Junior course, second term, 3 hours a week. Prerequisite courses: General Chemistry and Qualitative Analysis 303. Prerequisite to all later courses in organic chemistry. Required in the Department of Chemistry. Professor Neher, assisted by Mr. Goss.

303, 304. Chemistry of the Metals and Qualitative Analysis. The chemistry of the more important metals, accompanied by the preparation of a number of inorganic compounds, and the study and practice of the methods for separating and detecting the more common bases and acids and their derivatives, followed by the analysis of simple and complex substances. The course involves 6 to 8 hours of laboratory work,

besides class-room exercises, each week. Junior course, both terms, 3 hours a week. This course may also be taken as a Sophomore elective for Litt.B. and B.S. students, who have taken Chemistry 103, 104. Prerequisite course: General Chemistry. Prerequisite to all later courses in chemistry. Required in the Departments of Chemistry and Biology. Professor Smith, assisted by Mr. Sawyer.

305. Quantitative Analysis, Part I. The theory and practice of typical gravimetric and volumetric analyses, chiefly the analyses of simple salts. This course involves about nine hours of laboratory work, in addition to one or more class exercises, each week, Junior and Senior course, first term, 3 hours a week. Prerequisite courses: General Inorganic Chemistry and Qualitative Analysis. Prerequisite to the later courses in Qualitative Analysis. Required in the Department of Chemistry. Professor McCay, assisted by Mr. Eastman.

306. Quantitative Analysis, Part II. Continuation of Part I, including salts, minerals, alloys, and practice in combustions. This course involves about nine hours of laboratory work, in addition to one or more class exercises, each week. Junior and Senior course, second term, 3 hours a week. Prerequisite courses: General Inorganic Chemistry, Qualitative Analysis, Quantitative Analysis, Part I. Prerequisite to the Senior courses in Quantitative Analysis. Required in the Department of Chemistry. Professor McCay, assisted by Mr. Eastman.

*401. Quantitative Analysis, Part III. Tin-antimony alloys, ores, such as those of arsenic, antimony, iron, copper, etc., limestone, cement. This course involves about nine hours of laboratory work, in addition to

* Also listed as graduate course.

one or more class exercises, each week. Senior course, first term, 3 hours a week. Prerequisite courses: General Inorganic Chemistry, Qualitative Analysis, Quantitative Analysis, Parts I and II. Required the Department of Chemistry in the four-year course. Professor McCay.

*402. Quantitative Analysis, Part IV. Complicated substances, special methods, etc. This course involves about nine hours of laboratory work, in addition to one or more class exercises, a week. Senior course, second term, 3 hours a week. Prerequisite courses: General Inorganic Chemistry, Qualitative Analysis, Quantitative Analysis, Parts I, II, and III. Required in the Department of Chemistry in the four-year course. Professor McCay.

*403. Organic Chemistry. Continuation of Organic Chemistry 302, devoted in great part to a discussion of the cyclic compounds. Lectures and recitations. Senior course, first term, 3 hours a week. Prerequisite courses: General Chemistry, Qualitative Analysis, and Organic Chemistry 302. Required in the Department of Chemistry. Professor Neher.

*404. Physical Chemistry. Lectures with frequent recitations, both oral and written. Walker: *Introduction to Physical Chemistry*. Senior course, second term, 3 hours a week. Prerequisite courses: General Physics and General Chemistry. Required in the Department of Chemistry. Professor Hudson.

*405. Organic Preparations. The preparation and experimental study of typical carbon compounds, both acyclic and cyclic. About ten hours of laboratory work each week in addition to class exercises. Senior course, open only to students taking Organic Chem-

* Also listed as graduate course.

istry 403, first term, 3 hours a week. Prerequisite courses: General Chemistry, Qualitative Analysis, Organic Chemistry 302. Required in the Department of Chemistry. Professor Neher, assisted by Mr. Goss.

*406. Laboratory work in Physical Chemistry. Molecular weight determination by vapor density, freezing point, and boiling point methods; study of solutions, solubility, conductivity, etc. Methods for determining heat of neutralization and velocities of reactions. About eight hours of laboratory work each week in addition to class exercises. Ostwald-Luther: *Physiko-Chemische Messungen.* Senior course, to be preceded or accompanied by Physical Chemistry 404, second term, 3 hours a week. Required in the Department of Chemistry. Professor Hudson.

For graduate courses in Chemistry, see Department of the Graduate School, pp. 270, 271.

X. DEPARTMENT OF GEOLOGY

PROFESSORS SCOTT, PHILLIPS, SMYTH, FARR, AND VAN INGEN; DR. SINCLAIR, MR. DALE, AND MR. MITMAN.

301. Geology. Beginners' course, covering the subject in outline and designed both for those who intend to pursue the subject further, and for those who desire merely to obtain a general knowledge of the science. Scott: *Introduction to Geology.* Junior course, first term, 3 hours a week. General Chemistry or General Biology is required of departmental students only. Prerequisite to courses 302, 401. Professor Scott.

302. Introduction to Structural Geology. The interpretation of geological maps and sections, with study of the

*Also listed as graduate course.

common rocks and their most important structural relations, and the elements of geological surveying. Essentially a laboratory course. Field work required of all students. Junior course, second term, 3 hours a week. Prerequisite course: Geology 301. Prerequisite to Geology 403. Dr. Sinclair.

303. Mineralogy. Lectures, recitations, and practice in theoretical, descriptive, and determinative mineralogy; a study especially of rock-forming minerals and the commoner minerals in general. Junior course, first term, 3 hours a week. Prerequisite course: General Chemistry. Prerequisite to courses 304, 403, 407. Professor Phillips.

304. Mineralogy. Lectures and laboratory work on crystallography and the optical properties of crystals. E. S. Dana: *Textbook of Mineralogy*. Junior course, second term, 3 hours a week. Prerequisite course: Mineralogy 303. Professor Phillips.

306. Introduction to Palaeontology. The scope, problems, methods, and results of the study of fossil organisms with special reference to those that have important geological relations. Alternate with Mineralogy 304. Junior course, second term, 3 hours a week. Lectures and laboratory work. Prerequisite courses: General Geology or Biology. Prerequisite to course 405. Professor van Ingen.

*401, *402. Historical Geology. The geological history of the earth from its origin to recent times. The geographic, structural, and climatic changes, and the characteristic plants and animals of each period in its history. Lectures, laboratory exercises, and field work. Scott: *Introduction to Geology;* Chamberlin and Salisbury: *Geology, Volumes II and III.* Senior course,

* Also listed as graduate course.

both terms, 3 hours a week. Prerequisite courses: Geology 301. Professors Scott and van Ingen.

*403. Structural and Dynamic Geology. A study of the composition and structural features of the earth's crust. Lectures, laboratory and field work. Senior course, first term, 3 hours a week. Prerequisite courses: Geology 302 and Mineralogy 303. Professor Smyth.

*404. Economic Geology. The principles controlling the circulation of mineral matter in the earth's crust, and its concentration into workable deposits. Ries: *Economic Geology of the United States;* Kemp: *Ore Deposits of the United States.* Lectures and laboratory work. Prerequisite course: Geology 403. Senior course, second term, 3 hours a week. Professor Smyth.

*405, *406. Invertebrate Palaeontology. Systematic palaeontology and evolution of the more important groups of extinct invertebrates; principles of stratigraphical geology. Lectures, laboratory, and occasional field work. Zittel-Eastman, *Palaeontology, Vol. I.* Senior course, both terms, 3 hours a week. Prerequisite course: Introduction to Palaeontology 306. Professor van Ingen.

*407. Mineralogy. Lectures and laboratory work on the microscopical characters of the rock-forming minerals. Luquer: *Minerals in Rock Sections.* Senior course, first term, 3 hours a week. Prerequisite course: Mineralogy 304. Professor Phillips.

*408. Petrology. The study of rocks, their mineralogical and chemical composition, structure, mode of occurrence, origin, and classification. Lectures and laboratory work. Harker: *Petrology for Students.* Senior

* Also listed as graduate course.

course, second term, 3 hours a week. Prerequisite course: Mineralogy 407. Professor Smyth.

Summer Course in Field Geology. Juniors who contemplate electing the major part of their Senior studies in the Department of Geology are strongly advised to take part in the optional field work which will be offered during a portion of each summer vacation.

For graduate courses in Geology, see Department of the Graduate School, pp. 271 to 273.

XI. DEPARTMENT OF BIOLOGY

PROFESSORS SCOTT, RANKIN, MC CLURE, CONKLIN, DAHLGREN, AND FARR; DR. PATON; MR. SILVESTER, DR. L. R. CARY, DR. HARVEY, MR. GOULD, AND MR. WARDWELL.

201, 202. General Biology. Lectures, laboratory work, and recitations. An introduction to the fundamental properties of living things, their functions, structures, classification, habits, life-histories, and evolution. Selected forms are studied in the laboratory as illustrating the chief principles and generalizations of biology. Reference books: Sedgwick and Wilson; Hegner. Sophomore course, for B.S. and Litt.B. students, both terms, 3 hours a week. Prerequisite course: General Chemistry 103, 104, or its equivalent. Prerequisite to the subsequent courses in Biology. Professor Conklin and Dr. Cary, assisted by Professors Rankin and Dahlgren.

301, 302. General Biology. Lectures, laboratory work, and recitations. An introduction to the fundamental properties of living things, their functions, structures, classification, habits, life-histories, and evolution. Selected forms are studied in the laboratory as illustrat-

ing the chief principles and generalizations of biology. Reference books: Sedgwick and Wilson; Hegner. Junior course, for A.B. students, both terms, 3 hours a week. Prerequisite course: General Chemistry 103, 104 or its equivalent. Prerequisite to the subsequent courses in Biology. Professor Conklin and Dr. Cary, assisted by Professors Rankin and Dahlgren.

303, 304. Botany. Practical work in the field and laboratory, lectures and recitations. An introduction to the general principles of plant life. Besides the structure and functions of plants, their taxonomy and their relation to their environment will be studied, use being made of the facilities offered by the grounds of the University. Curtis: *Nature and Development of Plants;* Bergen and Davis: *Principles of Botany.* Junior course, both terms, 3 hours a week. Professor Rankin.

305. Comparative Osteology. Ontogeny and comparative structure of the skeletons of the different classes. Exercises in descriptive work. Each student must prepare a thesis on a skeleton specially assigned for his study. Flower: *Osteology of the Mammalia;* Reynolds: *The Vertebrate Skeleton.* The monographs on the skull, the shoulder-girdle, human anatomy. Senior course, first term, 3 hours a week. Prerequisite course: Sophomore course in Biology. Professor Farr.

306. Invertebrate Zoology. Lectures and laboratory work on selected phyla of Invertebrates. Junior course, second term, 3 hours a week. Prerequisite course, General Biology 201, 202. Dr. Cary.

*401. Comparative Anatomy of Vertebrates. Lecture and laboratory course. Lectures on the comparative anatomy of the organ systems of vertebrates, and dissec-

* Also listed as graduate course.

tion of the following forms: the dogfish, the pigeon, and a mammal. Marshall and Hurst: *Practical Zoölogy.* Reference books: Wilder: *History of the Human Body;* Kingsley: *Vertebrate Zoölogy;* Wiedersheim: *Vergleichende Anatomie der Wirbelthiere.* Senior course, first term, 3 hours a week. Prerequisite courses: Sophomore and Junior courses in Biology. Professor McClure and Mr. Silvester.

*402. Vertebrate Embryology. Lecture and laboratory course. A comparative study of the development of vertebrates. Hertwig: *Textbook of Embryology;* McMurrich: *The Development of the Human Body.* Senior course, second term, 3 hours a week. Prerequisite course: Comparative Anatomy 401. Professor McClure and Mr. Silvester.

*403. Histology. A study of protoplasm, the cell, and the tissue as they underlie animal and vegetable life. Required text-book: Dahlgren and Kepner: *Principles of Animal Histology.* Reference books: F. T. Lewis: *Stohr's Text Book of Histology;* Schneider: *Histologie der Thiere;* Wilson: *The Cell in Development and Inheritance.* Senior course, first term, 3 hours a week. Prerequisite course: Biology 201, 202. Professor Dahlgren.

*404. Advanced Histology, and Neurology. The comparative Histology of the nervous tissues and neuroglia; an outline of the structure of several important types of nervous systems including the vertebrate type; and work on several other special groups of tissues. Practice in microscopical technic. Thesis. Required text-books: Dahlgren and Kepner: *The Principles of Animal Histology;* J. B. Johnson: *The Nervous System of Vertebrates.* Senior course, second term, 3 hours a week. Professor Dahlgren.

* Also listed as graduate course.

*406. Vertebrate Palaeontology. Lectures and laboratory work on fossil vertebrates. Smith-Woodward: *Vertebrate Paleontology;* Zittel: *Handbuch der Paleontologie.* Senior course, second term, 3 hours a week. Prerequisite courses: Biology 201, 202, and Osteology. Professors Scott and Farr.

*407, *408. General Physiology. Lectures and laboratory work. An introduction to the phenomena exhibited by living matter. The substances of which organisms are composed will be studied and their role in the functioning of the cell discussed. The general physiology of muscle and nerve tissue, of the digestive tract (including absorption, nutrition, secretion and excretion and of the circulatory system (including respiration) will then be taken up, followed by an account of the coordinate activities of the nervous system, reflexes, tropisms, and the phenomena of reproduction, growth and regeneration. Howell's *Text Book of Physiology.* Senior course, both terms, 3 hours a week. Prerequisite course: Biology 201, 202. Dr. Harvey.

For graduate courses in Biology, see Department of the Graduate School, pp. 273 to 275.

XII. DEPARTMENT OF ASTRONOMY

PROFESSORS RUSSELL AND DUGAN

301. Astronomy. Elementary Astronomy. Mainly descriptive, exhibiting the leading facts regarding the solar system and an elementary explanation of the methods by which they are ascertained. Recitations on textbook, with lectures. Young: *Manual of Astronomy.* Junior course, first term, 3 hours a week. Professor Russell.

*Also listed as graduate course.

302. Astronomy. Stellar Astronomy. A review of the present state of knowledge concerning the stars. Stellar positions, proper-motions, radial velocities, and parallaxes; group and stream motions; visual and spectroscopic binaries; stellar spectra, colors, and temperatures; variable and new stars; masses and densities of the stars; characteristics of different spectral types; distribution of the stars in space; clusters and nebulae; theories of stellar evolution. Lectures. Junior course, second term, 3 hours a week. Professor Russell.

303. Astronomy. General Astronomy. Elementary astronomy for engineers. Lectures and recitations from text-book, with special reference to preparation for Geodesy 302. Young: *Manual of Astronomy*. Required of all C.E. Juniors, first term, 3 hours a week. Professor Dugan.

304. Astronomy. Practical Astronomy. Determination of time, latitude, and azimuth. Practice with the transit instrument, sextant, and theodolite. Determination of latitude with the zenith telescope. Required of all C.E. Juniors, second term, 2 hours a week. Professor Dugan.

*401, 402. Astronomy, *f*. Honors Course in Celestial Mechanics. Open to candidates for Honors in Mathematics and Physics. Elliptic motion; determination of orbits; disturbed motion; tidal evolution. Senior course, both terms, 3 hours a week. Prerequisite: Sophomore Honors Course in Mathematics. Professor Russell.

403. Astronomy. Practical Astronomy. The principal methods and instruments of astronomical observation; determination of latitude and time; work with the sex-

* Also listed as graduate course.

tant, transit, equatorial, and spectroscope. Class-room exercises, with observatory work. Campbell: *Elements of Practical Astronomy.* Senior course, first term, 3 hours a week. Prerequisite course, Astronomy 301. Professor Dugan.

For graduate courses in Astronomy, see Department of the Graduate School, pp. 266, 267.

XIII. DEPARTMENT OF HYGIENE AND PHYSICAL EDUCATION

PROFESSORS RAYCROFT, FAUVER, AND LUEHRING; MR. SULLIVAN AND MR. FOGGITT

The aim of the work in this department is to promote the general health and physical efficiency of the students. All members of the freshman class are required to take regular work as indicated below.

Physical Examinations. Each student is given a careful physical examination which serves as a basis for advice as to special corrective exercises, if needed, and an opportunity for a discussion with each individual on the various practices and habits that affect his physical and mental efficiency. This examination includes a few anatomical measurements; strength tests for determining muscular efficiency; and an examination of the eyes, ears, nose, throat, and the vital organs. Professors Raycroft, Fauver, and Luehring; and Mr. Foggitt.

Graded Exercises. The work consists of a large variety of games and exercises conducted under the supervision of the department. It is graded to meet the needs and ability of those in the classes, and is conducted out-of-doors whenever possible. The student may select the squad or class with which he will work. Every fresh-

man must pass a test in swimming. Classes are organized for beginners. Life-saving and methods of resuscitation are taught advanced classes. Required of all Freshmen, both terms, 3 hours a week. Professors Fauver and Luehring; Mr. Sullivan and Mr. Foggitt.

Personal Hygiene. Lectures and recitations. A discussion of the fundamentals of health and physical efficiency; the influence of diet, exercise, bathing and sleep; the effects of personal habits; the use of alcohol and tobacco; and a study of the more common infectious diseases—their nature, causes, methods of transmission and prevention. The lectures will be illustrated by the use of manikins, diagrams, and lantern slides. Reference books: Hough and Sedgwick, Woodhull, and Pyle. Freshman course, first term, 1 hour a week. Professors Raycroft, Fauver, and Luehring.

COURSES FALLING UNDER DIVISION D, BUT WHICH ARE NOT INCLUDED IN ANY ONE OF THE PRECEDING DEPARTMENTS

Graphics 203. Elementary Mechanical Drawing. A beginners' course. Willson: *Theoretical and Practical Graphics*. Elective, open only to B.S. and Litt.B. Sophomores who elect Mathematics at the same time. First term, 3 hours a week. Prerequisite to Graphics 204. Mr. McWilliams.

Graphics 204. Curve construction, structure drawing, intersections, etc. Lectures. Willson: *Graphics*. Elective course, open only to B.S. and Litt.B. Sophomores who have elected both Mathematics 201 and Graphics 203, and who elect Mathematics 202 during the second term. Second term, 3 hours a week. Professor Willson and Mr. McWilliams.

Graphics 302. Shadows, perspective, and valve-motion. Lectures, illustrated with lantern slides, text-book work, and practical problems on the drawing board. Willson: *Shadows and Perspective;* Halsey: *Slide Valve Gears.* Junior course, second term, 3 hours a week. Open only to such candidates for bachelors' degrees as intend to study Architecture or Engineering subsequent to graduation. Professor Willson, Mr. McWilliams, and Mr. Aymar.

Graphics 303. Descriptive Geometry. A lecture and text-book course on the fundamental problems of the point, line, and plane, followed by their application to developable, double-curved, and warped surfaces, and including trihedrals and spherical projections, practically applied in the solution of a large number of problems on the drawing-board. Willson: *Descriptive Geometry.* Junior course, first term, 3 hours a week. Mr. McWilliams.

Graphics 401. Stereotomy. Descriptive geometry applied to the solution of such problems in stone cutting as are likely to arise in railroad or architectural construction. A lecture and drafting-room course. Senior course, first term, 2 hours a week. Open only to such candidates for bachelors' degrees as intend to study Architecture or Engineering subsequent to graduation. Professor Willson and Mr. Aymar.

Geodesy 304. Surveying. A general outline of methods of surveying and their uses. Raymond: *Surveying.* Junior course, second term, 3 hours a week. Professor Harris.

Graphical Statics 304. Review of general principles of force polygons and of funicular polygons. Extensions to complex problems. Illustrations and drill in the solution of numerous examples drawn from statical and dynamical engineering, involving direct

stresses, and flexural, shearing, and torsional stress; also moments of inertia, centers of gravity of irregular figures, and fluctuations of energy of machines. Lectures, aided by Merriman and Jacoby, Part II. Reference book: Eddy: *New Constructions in Graphical Statics.* Junior course, second term, 3 hours a week. Prerequisite courses: Graphics, Physics, Mechanics. Mr. Bickford, under the direction of Professor McMillan.

Theory of Prime Motors (Civil Engineering 403). General relations of the factors of energy and power considered analytically and graphically; reduction of inertia and all resistances to driving point; efficiency; general theory of water motors (rotative); thermal motors:—combustion, calorific powers of fuels, theory of chimney-draft, efficiency of generator. Rankine: *Steam Engine and Other Motors.* Reference books: Ewing: *The Steam-Engine and Other Heat-Engines;* Ennis: *Applied Thermodynamics;* Weisbach: *Hydraulic Motors.* Senior course, first term, 3 hours a week, with laboratory work. Prerequisite courses: Physics, Mechanics (Analytical and Graphical), Chemistry. Prerequisite to Theory of Prime Motors (Civil Engineering 404). Professor McMillan and Mr. Bickford.

Theory of Prime Motors (Civil Engineering 404). Recitations and lectures, general equations of thermodynamics, expansion and compression curves of gases and vapors, diagrams of energy—[p. v. and t. e.]; modifying causes of diagrams; compound engines; explosive or combustion engines:—Otto cycle; compression and expansion curves; combustion engines with carburetting; oil-engines. Rankine: *Steam Engine and Other Motors.* Reference books: Ewing; Ripper, Ennis; Clerk: *Gas Engine.* Senior course,

second term, 3 hours a week, with laboratory work. Prerequisite courses: Physics, Applied Mechanics (Analytical and Graphical), Chemistry. Professor McMillan and Mr. Bickford.

Physical Geography 302. Morphology of the continents. Guyot: *Physical Geography; Earth and Man;* Davis: *Physical Geography;* Tarr: *Elementary Physical Geography;* Mill: *Realm of Nature.* Junior course, second term, 3 hours a week. Professor Libbey.

DEPARTMENT OF CIVIL ENGINEERING

PROFESSORS MC MILLAN, WILLSON, SMITH, AND HARRIS; MR. MC WILLIAMS, MR. AYMAR, MR. BICKFORD, MR. EDWARDS, MR. PENNYPACKER, MR. PLACE, AND MR. STERRETT.

THE FRESHMAN YEAR

English 101, 102, *a*. Selected authors for special study and for general reading. The principles of composition and rhetoric will be derived therefrom. Frequent reports on assigned reading. Required of all C.E. Freshmen who do not take English 101, 102, *b*, both terms, 2 hours a week. Professor Covington, assisted by the English Preceptors and Instructors.

English 101, 102, *b*. To Freshmen who enter the Cliosophic or the American Whig Society there is offered, as a substitute for 101, 102, *a*, an elective course in Public Speaking and Debate. Required of all C.E. Freshmen who do not take English 101, 102, *a*, both terms, 2 hours a week. Professor Covington, assisted by Professor Kennedy in the American Whig Society, and Professor Heermance in the Cliosophic Society.

Physics 101, 102. General Physics. General course in physics, including lectures, recitations, and laboratory work. Crew: *General Physics*. Required of all C.E. Freshmen, both terms, 4 hours a week. For this course a fee of $5 is charged, and a deposit on apparatus of $5 is required. Professors McClenahan, Trowbridge, Cooke, and Northrup; Mr. Suydam, Mr. Stevens, Mr. Smith, Mr. Carson, Mr. Eves, and Mr. Kiefer.

Mathematics 103. Selected Portions of Algebra. Undetermined Coefficients, Division Transformation, Partial Fractions, Elementary Theory of Equations, Permutations and Combinations; Review of Plane Trigonometry; Elements of Spherical Trigonometry. Fine: *College Algebra;* Hun and MacInnes: *Elements of Plane and Spherical Trigonometry.* Required of all C.E. Freshmen, first term, 4 hours a week. Professor Swift.

Mathematics 108. Coördinate Geometry, treated from the Cartesian standpoint. Fine and Thompson: *Coordinate Geometry.* Required of all C.E. Freshmen, second term, 4 hours a week. Professors Thompson, Gillespie, Hun, MacInnes, Swift, and Wedderburn; Dr. Dederick, Mr. Alexander, Mr. Gilman and Mr. Smith.

Chemistry 101, 102. General Inorganic Chemistry. Experimental lectures on the elements and their compounds, supplemented by laboratory work. Two lectures, one recitation, and one laboratory exercise of 3 hours each week. Smith: *General Chemistry for Colleges.* Required of all C.E. Freshmen, both terms, 4 hours a week. Professor Van Nest, assisted by Mr. Capps and Mr. Dale.

Graphics 101. Elementary technical drawing. Line and brush work, conventional representations, lettering, trochoidal curves, oblique and orthographic projections, working drawings, and tracing. Willson: *Theoretical and Practical Graphics.* Required of all C.E. Freshmen, first term, 2 hours a week. Professor Willson, Mr. McWilliams, and Mr. Aymar.

Geodesy 101, 102. Land surveying. Theory of chain and compass surveying. Surveys of public lands. Leveling. Lectures and recitations. Staley-Gillespie: *Land-*

Surveying. Required of all C.E. Freshmen, first term, 1 hour a week; second term, 3 hours a week. Professor Harris, Mr. Edwards, Mr. Place, and Mr. Sterrett.

THE SOPHOMORE YEAR

Physics 205, 206. Heat, and Electricity and Magnetism. Lectures based on experimental demonstrations. Frequent written recitations. Edser: *Heat;* Hadley: *Magnetism and Electricity.* Sophomore course, required for C.E., both terms, 3 hours a week. Professor Loomis.

Mathematics 203, 204. Calculus. Required of all C.E. Sophomores, both terms, 3 hours a week. Professors Hun and Swift.

Mathematics 205. Geometry. A course supplementary to Mathematics 108. Required of all C.E. Sophomores, first term, 2 hours a week. Professor Thompson.

Mathematics 206. Analytical Mechanics. Introductory course. Required of all C.E. Sophomores, second term, 2 hours a week. Professors Gillespie, Wedderburn, and Hun.

Mineralogy 201. Determinative mineralogy (blowpipe analysis), preceded by a short course of lectures, including elements of crystallography. Cornwall: *Manual of Blowpipe Analysis and Determinative Mineralogy.* Required of all C.E. Sophomores, first term, 3 hours a week. Professor Phillips.

Geology 202. Elementary course. General outline of the subject, including dynamical, structural, and historical geology. Scott: *Introduction to Geology.* Reference book: Chamberlin and Salisbury: *Geology.* Required of all C.E. Sophomores, second term, 3 hours a week. Professor Farr.

Graphics 201. Elementary descriptive geometry, intersections, development, and model making. Required of all C.E. Sophomores first term, 3 hours a week. Professor Willson, Mr. McWilliams, and Mr. Aymar.

Graphics 202. (*a*) Structure drawing. Detail and assembly drawings of bridges, etc., from blue prints or actual measurement. Required of all C.E. Sophomores second term, 2 hours a week. (*b*) Graphic solution of kinematic and projective problems, higher plane curves, cams, crystal projection, and mechanisms. Required of all C.E. Sophomores, second term, 1 hour a week. Professor Willson, Mr. McWilliams, and Mr. Aymar.

Geodesy. 201. Line and angle measurements, farm surveying, field and office work, plotting of field notes. Topographical drawing in pen work and colors, lettering, map of farm survey. McMillan-Smith: *Topographical Drawing.* Required of all C.E. Sophomores, first term, 3 hours a week. Professor Harris, Mr. Edwards, Mr. Place, and Mr. Sterrett.

Geodesy 202. Structure and adjustment of engineer's field instruments, leveling, contouring, triangulation, and transit work. Lectures, recitations, field and office work. Staley-Gillespie: *Land Surveying;* Tracy: *Plane Surveying.* Required of all C.E. Sophomores, second term, 3 hours a week. Professor Harris, Mr. Edwards, Mr. Place, and Mr. Sterrett.

THE JUNIOR YEAR

Mathematics 305, 306. Analytical Mechanics. The general principles of mechanics; the statics and dynamics of particles, rigid bodies, and fluids. Lectures. Required of all C.E. Juniors, first term, 3 hours a week. Professors Gillespie and MacInnes.

Astronomy 303. General Astronomy. Elementary astronomy for engineers. Lectures and recitations from text-book, with special reference to preparation for Geodesy 302. Young: *Manual of Astronomy.* Required of all C.E. Juniors, first term, 3 hours a week. Professor Dugan.

Astronomy 304. Practical Astronomy. Determination of time, latitude, and azimuth. Practice with the transit instrument, sextant, and theodolite. Determination of latitude with the zenith telescope. Required of all C.E. Juniors, second term, 2 hours a week. Professor Dugan.

Civil Engineering 301. Materials of Construction. Descriptive course. Required of all C.E. Juniors, first term, 2 hours a week. Professor Smith.

Civil Engineering 302. Mechanics of Materials. Strength and elasticity of materials and applications to beams, columns, and shafts. Required of all C.E. Juniors, second term, 4 hours a week. Professor Smith and Mr. Pennypacker.

Geodesy 301. Town, mine, and hydrographic surveying. Barometric leveling, surveying with the stadia and gradienter. Solar transit. Lectures, recitations, and field work. Raymond: *Surveying;* Staley-Gillespie: *Land Surveying.* Required of all C.E. Juniors, first term, 4 hours a week. Professor Harris, Mr. Edwards, Mr. Place, and Mr. Sterrett.

Geodesy 302. Railroad engineering. Lectures, recitations, and field work. Searles: *Field Engineering.* Required of all C.E. Juniors, second term, 5 hours a week. Professor Harris, Mr. Edwards, Mr. Place, and Mr. Sterrett.

Graphics 301. Advanced descriptive geometry, pure, and as applied to developable, double-curved, and warped

surfaces, spherical projections, and trihedrals. Lectures, text-book work, and practical drafting. Willson: *Descriptive Geometry.* Required of all C.E. Juniors, first term, 2 hours a week. Professor Willson, Mr. McWilliams, and Mr. Aymar.

Graphics 302. Shadows, perspective, and valve-motion. Lectures, illustrated with lantern slides, text-book work, and practical problems on the drawing board. Willson: *Shadows and Perspective;* Halsey: *Slide Valve Gears.* Required of all C.E. Juniors, second term, 3 hours a week. Professor Willson, Mr. McWilliams, and Mr. Aymar.

Civil Engineering 303. Graphical Statics. Review of the general principles of force polygons and of funicular polygons. Applications to the solution of direct, flexural, shearing, and torsional stresses, determination of centers of gravity and moments of inertia. General and special applications to girders and framed structures, non-continuous and continuous. Merriman and Jacoby: *Part II.* Reference book: Eddy: *New Constructions in Graphical Statics.* Required of all C.E. Juniors, first term, 3 hours a week. Mr. Bickford, under the direction of Professor McMillan.

Geodesy. Summer field practice. Extended field operations and office work, occupying the two weeks following the close of the second term of Junior year. Professor Harris, Mr. Edwards, Mr. Place, and Mr. Sterrett.

THE SENIOR YEAR

Civil Engineering 401. Framed Structures. Analytical and graphical determinations of stresses in girders and simple trusses, including the design of details. The theory of the suspension bridge and of the swing bridge. Johnson: *Framed Structures.* References:

Blue Prints of Shop Drawings. Required of all C.E. Seniors, first term, 5 hours a week. Professor McMillan and Mr. Bickford.

Civil Engineering 402. Framed Structures. The theory of cantilever bridges, of arched bridges, and of steel-frame buildings. Johnson: *Framed Structures.* Required of all C.E. Seniors, second term, 3 hours a week. Professor McMillan and Mr. Bickford.

Civil Engineering 403. Theory of Prime Motors. General relations of the factors of energy and power considered analytically and graphically: reduction of inertia and all resistances to driving point; efficiency; general theory of water motors (rotative); thermal motors:—combustion, calorific powers of fuels, theory of chimney-draft, efficiency of generator. Rankine: *Steam Engine and Other Motors.* Reference books: Ewing: *The Steam Engine and Other Engines;* Ripper: *Steam Engine;* Ennis: *Applied Thermodynamics for Engineers;* Weisbach: *Hydraulic Motors.* Required of all C.E. Seniors, first term, 3 hours a week, with laboratory work. Prerequisite courses: Physics, Applied Mechanics (analytical and graphical), Chemistry. Prerequisite to Civil Engineering 404. Professor McMillan and Mr. Bickford.

Civil Engineering 404. Theory of Prime Motors. Recitations and lectures. General equations of thermodynamics; expansion and compression curves of gases and vapors, diagrams of energy [p. v. and t. e.]; modifying causes of diagrams; compound engines; explosive or combustion engines:—Otto cycle; compression and expansion curves; combustion engines with carburetting; oil-engines. Rankine: *Steam Engine and Other Motors.* Reference books: Ewing; Ripper; Ennis; Clerk: *Gas Engine.* Required of all

C.E. Seniors, second term, 3 hours a week. Prerequisite courses: Physics, Applied Mechanics (analytical and graphical), Chemistry. Professor McMillan and Mr. Bickford.

Civil Engineering 405. Hydraulics. Theory. Required of all C.E. Seniors, first term, 2 hours a week. Professor Smith or Mr. Pennypacker.

Civil Engineering 406. Water Works. Outlining of the planning and construction of systems of water supply. Lectures. Reference book: Turneaure and Russell: *Public Water Supplies.* Required of all C.E. Seniors, second term, 2 hours a week. Professor Smith.

Graphics 401. Stereotomy. Descriptive geometry applied to the solution of such problems in stone cutting as are likely to arise in railroad or architectural construction. A lecture and drafting-room course. Required of all C.E. Seniors, first term, 2 hours a week. Professor Willson and Mr. Aymar.

Civil Engineering 408. Sewerage and Drainage. The sewerage and drainage of buildings and towns, including sewage purification and disposal. Folwell: *Sewerage.* Required of all C.E. Seniors, second term, 2 hours a week. Professor McMillan and Mr. Bickford.

Civil Engineering 409. Railroad Engineering. Preliminary and location surveys of routes, staking out for construction, and estimating cost. Field and office work. Searles: *Field Engineering.* Reference book: Wellington: *Railway Location.* Required of all C.E. Seniors, first term, 3 hours a week. Professor Harris, Mr. Edwards, and Mr. Sterrett.

Civil Engineering 410. Roads. Traction on different surfaces. Considerations affecting the value of a road improvement; the location of country roads; road construction and maintenance. Pavements, materials

and qualities, tests of materials. Morrison: *Highway Engineering.* Required of all C.E. Seniors, second term, 2 hours a week. Professor Harris.

Civil Engineering 412. Masonry Structures. The theory of the stability of masonry structures. Required of all C.E. Seniors, second term, 2 hours a week. Professor Smith and Mr. Pennypacker.

Civil Engineering 414. Methods of Construction. Study of the methods employed in the building of engineering structures. Foundations. Baker: *Masonry Construction.* Required of all C.E. Seniors, second term, 2 hours a week. Professor Smith and Mr. Pennypacker.

Civil Engineering 415. Laboratory Work. The erection of structures, the gauging of water, the testing of motors and of materials of construction. Required of all C.E. Seniors, first term, 2 hours a week. Professor Smith, Mr. Bickford, and Mr. Pennypacker.

Civil Engineering 416. Laboratory Work. The erection of structures, and the testing of motors. Required of all C.E. Seniors, second term, 1 hour a week. Professor McMillan, Mr. Bickford, and Mr. Pennypacker.

SCHOOL OF ELECTRICAL ENGINEERING

FACULTY

MALCOLM MACLAREN, E.E., A.M., *Professor of Electrical Engineering.*

HOWARD MCCLENAHAN, E.E., M.S., LL.D., *Professor of Physics.*

*GEORGE AUGUSTUS HULETT, PH.D., *Professor of Physical Chemistry.*

CLAUDE SILBERT HUDSON, PH.D., *Acting Professor of Physical Chemistry.*

EDWIN FITCH NORTHRUP, PH.D., *Assistant Professor of Physics.*

JOHN RENSHAW CARSON, E.E., M.S., *Instructor in Electrical Engineering and Physics.*

The course in Electrical Engineering is designed to furnish instruction in the theory of electricity and in its application in the arts and industries. The special course of study in electricity occupies two years of graduate work.

REQUIREMENTS FOR ADMISSION

Graduates of any accredited college will be admitted to the course in Electrical Engineering without examination, provided they have taken the requisite courses in mathematics, including calculus and elementary differential equations, general and experimental physics, and general chemistry. Applicants who are not graduates of any institution may be admitted to the course upon passing satisfactory examinations in these subjects.

A reading knowledge of scientific French and German is desirable as some of the text-books and reference books are written in those languages.

*Absent on leave.

TUITION

The fee for tuition in the School of Electrical Engineering is $160 per annum.

COURSE OF STUDY

First Year

Mathematical Theory of Electricity and Magnetism. Theory of the potential; lines and tubes of force; electrostatics; dielectrics, electric images; magnetism and magnetic induction; electromagnetism; electromagnetic induction; equations of the electromagnetic field; electromagnetic theory of light; theory of alternating currents; general equations; effects of resistance, inductance and capacity; distributed capacity; the rotating field; single and polyphase currents; high frequency currents and electrical oscillations; alternating current calculations; the symbolic method. Two exercises, about five hours per week, are devoted to this work. Professor McClenahan.

Electrical Measurements. Introductory principles: units, concrete standards, dimensions of electrical quantities. Elementary principles of oscillating systems as found in measuring instruments. Theory of networks. Laboratory practice in the measurement of: quantity of electricity; electromotive force; electric currents (small, medium, and large); capacity by ballistic, mixture, and A. C. method; self and mutual inductances; electric resistances (medium, high, and low); conductivity determinations. Magnetic measurements of: flux density, magnetic hysteresis, and permeability. In the second half of the year the theory and practice of measuring alternating current quantities will be taken up by both lectures and laboratory work. The subjects covered will include the measurement of alternating

currents, reactance, impedance, phase angles, power and energy, power factor, frequency and the ratios of transformers. Much time is devoted in the lectures to giving a clear interpretation of electrical and magnetic phenomena, and to the precise physical meaning of electrical and magnetic quantities. Each student devotes about two days a week to this course. Professor Northrup.

The Theory and Design of Direct-Current Machinery. The student is required in this course to calculate magnetization curves for a number of different types of machines, to familiarize himself with the various types of field and armature windings, and make a special study of the theory of commutation. Theoretical determinations are made upon actual commercial machines, upon which test data are available for checking results. Various tests upon direct-current machines are also made by the students during the course, and finally, each student executes a complete design including general and detail drawings, of a direct-current generator. Professor MacLaren.

During the first year an opportunity is also given to students who may be deficient in such allied subjects as Theory of Prime Motors, Strength of Materials, etc., to take suitable courses in these subjects in the Department of Civil Engineering.

Second Year

The Theory of Alternating Currents. This course embraces the mathematical theory of alternating current circuits and of alternating current machinery, including a study of the transformer, induction machines, alternating current generators, synchronous motors and polyphase systems. Two exercises a week for one term. Mr. Carson.

Design of Alternating Current Machinery. This is a continuation of the first year course in design and the same procedure is followed, except that the student executes designs for alternating current generators, transformers and induction motors. Two exercises a week for one term. Professor MacLaren.

Railway Engineering. This course is divided into three parts. The first part covers a theoretical study of the principles of locomotion, followed by the calculation of schedule speeds, power consumption, equivalent heating loads upon the motors, etc., for some representative line upon which the operating data are available for comparing results. In the second part, a series of lectures is given upon the different electrical systems in use upon interurban trolley roads. In the third part, consideration is given to some of the problems of heavy electric traction. It is also usually possible to carry out a series of car tests upon some representative interurban line. Two exercises a week for one term. Professor MacLaren.

Electrochemistry. Two lectures a week are devoted to a consideration of the fundamental principles involving the mutual transformation of electrical and chemical energy, while the student is given special topics to work up and present to the class for discussion.

Two laboratory periods are devoted to work which illustrates important principles in theoretical and applied electrochemistry. The Electrochemical Laboratory is fully equipped for conductivity measurements, and measurements of ionic velocities, and the equipment includes various types of voltameters, normal and half electrodes, etc. The work done in this Laboratory on standard cells with the potentiometer, constant temperature baths, etc., furnishes a most

exact basis for all E. M. F. measurements and for the determination of high temperatures with thermo-couples. A study is made of types of primary and secondary batteries, electrolytic refining of metals, and electroplating. Electric furnaces of different types are provided to illustrate some of the principal processes in electro-thermics. Professor Hudson.

An extended and specialized course will be given to those who wish to devote their attention to electro-chemical engineering.

Testing. The equivalent of about two days a week during the year is set apart for testing dynamos, motors, transformers, lamps, engines and boilers. A complete plant test for an all-day run is carried out each year by the students of the School.

Collateral Lectures. Lectures are given during the second half of the year on power plant design, in which the principal electrical and mechanical features involved in the utilization of the different kinds of motive power are considered; on transmission of energy; on electric lighting, including the systems of distribution and a comparison of the different types of illuminants; on the principles and methods of photometry; and on the principles and application of telegraphy and telephony, both with and without wires. Professor MacLaren.

DEGREE

On completion of this course the student is entitled to apply for the degree of Electrical Engineer. With his application he must present a thesis on some subject connected with electrical science.

THE GRADUATE SCHOOL

The affairs of the Graduate School are administered by a committee of the University Faculty known as the Faculty Committee on the Graduate School. The Dean of the Graduate School is Chairman of this committee. All inquiries should be addressed to Professor West, Dean of the Graduate School.

Admission to the Graduate School on diploma is granted to those who possess a Bachelor's degree from Princeton University, or from other institutions maintaining a similar standard in distinctively liberal studies for the Bachelor's degree. An applicant for admission whose undergraduate course is regarded as unsatisfactory or deficient may, with the permission of the Faculty Committee on the Graduate School, be admitted to graduate standing while making up his deficiencies by undergraduate work, or he may be required to enroll himself as an undergraduate. The regulation regarding admission of graduates to undergraduate standing as "Students Pursuing Partial Courses" is given on page 98.

All graduate students, whether graduates of Princeton or of another institution, are required to apply for admission at the office of the Dean of the Graduate School before October first of each year, and those who present themselves for the first time must submit to the Dean their diplomas and such other credentials as may be required. Graduates of universities other than Princeton are required to pay to the Treasurer a matriculation fee of five dollars.

Immediately after admission every graduate student, including graduate students of the previous year, shall register and report his courses at the office of the Registrar. All

graduate students, except Fellows, shall pay to the Treasurer the sum of five dollars for each course each term. The total maximum charge is not to exceed twenty dollars a term. Extra charges will be made for certain laboratory courses, the amount to depend on the nature of the course pursued.

DEGREES

The following degrees are given for graduate study: Master of Arts and Doctor of Philosophy.

Master of Arts

The degree of Master of Arts may be conferred only upon those who hold a Bachelor's degree in the liberal arts and sciences from this or another approved college who shall also have devoted at least one year exclusively to resident graduate study in the University under the care of the Faculty, passing examinations upon the studies pursued; or shall have taken graduate courses in the University involving at least three hours a week each term for four terms and passed satisfactory examinations upon these courses, and on such extra reading as may be assigned. The fee for the degree is ten dollars, to be paid to the Treasurer of the University before the candidate enters his last examinations. Every candidate for the Master's degree in one year is expected to take throughout the year at least three graduate courses unless another arrangement is permitted by the Faculty Committee on the Graduate School.

Every candidate for the Master's degree shall announce to the Faculty Committee on the Graduate School, at least eight months before the degree can be conferred, the subjects which he intends to pursue. These subjects shall be such as to form a consistent and well coördinated body of studies, and shall be subject to the approval of the Faculty Committee on the Graduate School.

Doctor of Philosophy

Subject to the regulations hereinafter stated, the degree of Doctor of Philosophy may be conferred upon any Bachelor of Princeton University, or of another approved institution, provided he has spent at least two years exclusively in study for the degree. It should be clearly understood that two years is the minimum period required and that in all but the rarest cases three years will be found necessary. One year must be spent in residence at Princeton.

REGULATIONS

Candidacy.—Admission to the Graduate School does not necessarily imply admission to candidacy for a higher degree. A graduate student who desires to become a candidate for the Doctor's degree must make formal application to the Faculty Committee on the Graduate School to be admitted to candidacy at least as early as the beginning of the academic year in which he proposes to present himself for the final examination. He must designate on his application the subject in which he proposes to do his work. This application for candidacy must be endorsed by the Department in which the subject of study lies and must include a satisfactory certificate of the candidate's ability to use French and German as instruments of research. The application, thus endorsed, will be submitted to the Faculty Committee on the Graduate School for final action, which shall then be reported to the University Faculty.

Subjects of Study.—The subjects of study in which the University offers graduate instruction are as follows:

Philosophy
History
Politics
Economics
Art and Archæology
Classics
Romanic Languages
Germanic Languages
English
Mathematics
Astronomy
Physics
Chemistry
Biology
Geology

Before offering himself for the final examination the candidate is expected to have acquired a broad general knowledge of the subject which he has chosen and a comprehensive and detailed knowledge of some one main division of it. In certain cases, however, the candidate may, on the recommendation of the Department in which his subject lies and with the approval of the Faculty Committee on the Graduate School, substitute for a main division of his subject a like division of a germane subject; or he may be required to take additional work outside his subject.

Candidates for the Doctor's degree are also required to take at some time during their period of graduate study a series of twenty weekly lectures on the general trend of philosophical and scientific thought, to be given, with assigned collateral reading, by a member of the Department of Philosophy.

The Thesis.—The candidate shall present to the Department in which his work chiefly lies a thesis on some topic in the special field of his study. If the thesis is accepted by the Department, as giving evidence of high attainment and the power of independent research, the candidate will be recommended by the Department to the Faculty Committee on the Graduate School for admission to the final examination. This recommendation must be accompanied by a statement of the amount and character of the graduate work done and by the formal approval of the thesis.

The Examination.—Examinations for the Doctor's degree are conducted orally in the presence of the Faculty and cannot be divided. A written examination may precede the oral examination if the examiners so desire.

A candidate who passes the examination must print his thesis and deposit 100 copies of it in the University Library. A satisfactory guaranty of the delivery of these copies must be furnished before the conferring of the degree.

Fees.—Those who apply for the degree shall pay the Treasurer of the University a fee of sixty dollars, in two instalments of thirty dollars, the first to be paid when the candidate is enrolled and the second when he sends in his thesis.

THE GRADUATE HALL

The house and grounds of "Merwick," an estate of eleven acres on Bayard Lane, within five minutes' walk of the University, have been secured as a temporary residential hall of the Graduate School and placed in the immediate charge of Professor Howard Crosby Butler, of the University Faculty. The number of graduate students taken in residence is limited to fourteen, and twelve more are admitted to the table. Through the liberality of several friends of the University the equipment and maintenance of "Merwick" have been so far provided for that the expenses of graduate students who are admitted to its privileges will be moderate.

An additional house, known as The Annex, has been secured, affording lodgings for eight students. Other desirable rooms in town may be secured at moderate rates.

All applications for information on these matters should be made to the Dean of the Graduate School.

THE GRADUATE COLLEGE

The buildings of the Graduate College will be ready for occupancy in September 1913. This group of buildings, now in process of erection, consists of Thomson College, the gift of the late Mrs. J. R. Thomson Swann; Procter Hall, the gift of William Cooper Procter of the Class of 1883 in memory of his parents; the South Tower, the gift of M. Taylor Pyne of the Class of 1877; Wyman House, contributed by the Estate of Isaac C. Wyman; and the Cleveland Memorial Tower in memory of Ex-President

Grover Cleveland, erected out of popular contributions collected by the Cleveland Monument Association.

The endowments of the Graduate College include the Fellowship Fund of $300,000 given by William Cooper Procter of the Class of 1883 and the bequests under the will of Isaac C. Wyman of the Class of 1848.

FELLOWSHIPS

I. UNIVERSITY FELLOWSHIPS

These fellowships were founded by subscription and endowment and were intended by the founders to encourage study and promote original research in the several departments to which they are assigned. They are distinguished from the College fellowships by being open to the graduates of any American college, while the appointments are made, not by competitive examination, but by a comparison of the records presented by the applicants as to their previous collegiate standing, capacity, and character.

The University fellowships are subject to the following regulations:

1. A Fellow must devote himself to study under the direction of the department in which the fellowship is provided. But any Fellow resident in Princeton may be called upon occasionally to give instruction in his department.

2. A Fellow is not ordinarily permitted to give private tuition.

3. The fellowships are to be held for one year, but in cases of special merit they may be continued for a longer period by recommendation of the department and sanction of the Faculty.

4. The candidates shall be graduates possessing a satisfactory Bachelor's diploma in liberal studies from an accredited American college. An application should be accompanied with evidence of the qualifications of the applicant to pursue an independent course of study and investigation in the department concerned.

5. Appointment shall be made by the Faculty upon

recommendation of the professors in the department interested and of the Faculty Committee on the Graduate School, and shall be announced at Commencement.

6. All requests for fellowship or scholarship application blanks should be addressed to the Dean of the Graduate School and all applications should be in the hands of the Dean of the Graduate School on or before March 15th, the appointees to hold their positions for a year from the following September. Applications received later than March 15th may be considered in special cases, and to fill vacancies.

Porter Ogden Jacobus Fellowship

Established in 1905 by the generosity of Mrs. Clara Cooley Jacobus. This fellowship will be conferred upon that regularly enrolled student of the graduate school who, in the judgment of the University Faculty, shall have evinced the highest scholarly excellence in his graduate work during the year. The appointee to this fellowship receives the income from an endowment of $25,000 and is expected to devote himself exclusively to study under the direction of the Faculty.

The Charlotte Elizabeth Procter Fellowships

These fellowships are established on an endowment of three hundred thousand ($300,000.00) dollars, given in memory of Charlotte Elizabeth Procter by her son. The terms of the fellowships are as follows:

1. The fellowships shall be known as "The Charlotte Elizabeth Procter Fellowships", and the holders thereof shall be exempt from tuition fees.

2. The fellowships are open only to unmarried men who are graduates of not more than six years' standing and who hold the Bachelor's degree in distinctively liberal studies from Princeton University or from some other institution maintaining a similar standard for the Bachelor's degree.

3. Appointment is to be made by vote of the University Faculty on nomination by the Dean of the Graduate School after consultation with the full professors in the department interested.

4. The tenure of each fellowship is one academic year, subject to re-appointment for not more than two years longer, except on evidence of extraordinary ability and upon unanimous vote of the University Faculty.

5. The fellowships are not to be allocated to separate departments but are open to all the departments conducting graduate work in the Liberal Arts and Sciences.

6. Every Fellow appointed on this Foundation shall reside in the buildings of the Graduate College, unless dispensed therefrom by the Dean of the Graduate School, and shall devote himself to advanced study to the exclusion of tutoring, teaching, lecturing or any other occupation or employment.

7. In case the conduct or work of any Fellow is unsatisfactory, the tenure of his fellowship may be terminated by the University Faculty.

8. The stipend of each fellowship shall be one thousand ($1,000.00) dollars annually, and no fellowship may be divided.

9. The income of the Foundation is to be applied to maintaining as many fellowships, each yielding one thousand ($1,000.00) dollars annually, as eighty per cent of the income will warrant. All income in excess of eighty per cent shall be applied first, to maintaining the principal of the Foundation, and then to re-investment for the purpose of increasing the stipend of the fellowships in amounts of one hundred ($100.00) dollars each, as rapidly as eighty per cent of such re-investment will permit.

PROVIDED, HOWEVER, that whenever the stipend of such fellowships amounts to fifteen hundred ($1500.00) dollars

each per year, thereafter no further increase in the stipend shall be made, but additional fellowships of fifteen hundred ($1500.00) dollars shall be founded as rapidly as said eighty per cent of such re-investment will allow. All excess of income remaining at the end of each fiscal year is to be applied to the increase of the capital fund.

Ten fellowships, each on a stipend of $1,000, are available for 1913-1914 on this foundation.

J. S. K. Mathematical Fellowship Fund

This fund was founded in 1873 by a resident of New York City, who gave $11,000 for the purpose. Through accumulations of interest it now amounts to $24,150. In accordance with the deed of gift, the income from this fund is to be "used exclusively for University Fellowships in the department of mathematics."

One Fellow in mathematics will be appointed each year. Frequently a second Fellow may be appointed. Appointments will be made on the basis of the records presented by the applicants as to their previous collegiate standing, capacity and character. In addition, in the case of resident students, a competitive examination may be held in June on geometry, differential equations, and the theory of functions.

South East Club University Fellowship in Social Science

This fellowship, which pays to the holder $500 per annum, was founded by alumni of the classes of '76, '77, '78, and '79—former residents of the South Entry of East College.

Class of 1877 University Fellowship in Biology

This fellowship pays to the holder $400 per annum.

Charles Scribner University Fellowship in English Literature

This fellowship, which yields the holder $500 per annum, was founded in memory of Charles Scribner, of the Class of 1840, by his son, Charles Scribner, of the Class of 1875.

University Fellowship in Archaeology

This fellowship pays to the holder $400 per annum.

Thaw Fellowship in Astronomy

This fellowship, which pays to the holder the income of $10,000, was founded by Mrs. William Thaw.

John Harding Page Classical Fellowship

This fellowship was established in 1900 by Mrs. James Laughlin, Jr., as a memorial to her father, Mr. John Harding Page. It is conferred by appointment of the Faculty and pays the holder the income of $10,000.

Francis Hinton Maule Biological Fellowship

This fellowship was founded in 1901 by Mr. and Mrs. Francis I. Maule as a memorial of their son, Francis Hinton Maule, who was a student in the University during the years 1895-98. It is conferred by appointment of the Faculty and pays the holder the income of $10,000.

Class of 1860 Experimental Science Fellowship

This fellowship was founded in 1870 upon the sum of $10,000 subscribed by the class of 1860. A deficiency of income, resulting from the depreciation of the value of the securities in which the principal was invested and the lowering of the rate of interest, is paid, by the consent of the donor, from the income of the Magee Professorship of Mining and Engineering, founded by George J. Magee, Esq., of the Class of 1860.

By action of the Board of Trustees, taken in 1904, this

fellowship was constituted a University Fellowship, to be administered, under the regulations governing the administration of such fellowships, by the Departments of Physics and Chemistry.

Harvard Fellowship in Chemistry

Founded in 1905 by the generosity of one of the Fellows of Harvard University. The holder of this fellowship receives the income of $10,000.

Gordon Macdonald Fellowship

This fellowship, at present unassigned to any department, was established in 1908 by Mr. James Speyer as a memorial of his friend and partner, Gordon Macdonald. The stipend is about $400.

Orson Desaix Munn University Fellowship in Electrical Engineering

This fellowship was established in 1908 as a memorial to Orson Desaix Munn by his son, Charles A. Munn, of the Class of 1881, and Mrs. Henry Norcross Munn.

It is awarded to the applicant who has made the best record in undergraduate work in Princeton, or other accredited college, and who shows the highest qualifications in respect to those subjects which are directly preparatory to the course in Electrical Engineering.

It is conferred by appointment of the Faculty, upon recommendation by the School of Electrical Engineering, and pays the holder the income of $10,000.

All applications must be in the hands of the School of Electrical Engineering before April 15th.

Boudinot Historical Fellowship

This fellowship, founded in part upon a bequest of Dr. Elias Boudinot, of New Jersey, was constituted a University Fellowship in 1909. The stipend is $200.

Boudinot Modern Language Fellowship

This fellowship, founded in part upon a bequest of Dr. Elias Boudinot, of New Jersey, was constituted a University Fellowship in 1909. The stipend is $200.

Class of 1883 University Fellowships

In June, 1910, the Class of 1883 contributed the sum of $30,000 to establish two University Fellowships with an income of not less than $600 each; the two fellowships to be awarded by preference in the Department of Politics, Physics, Chemistry, Biology or Geology.

II. COLLEGE FELLOWSHIPS

Besides the degrees and honors conferred in the regular course, annual fellowships, competitive scholarships, and prizes are offered as special incentives to study, in the classes or departments with which they are connected.

Only matriculated students who are candidates for a degree are admitted to the competition for these fellowships, prizes, and scholarships, and no one is admitted to such competition who has failed to pass satisfactorily his last preceding examination in any of the departments.

No member of any class is allowed to compete for more than one of the fellowships or scholarships offered to that class.

Every competitor must have been a member of the University in full standing for at least two academic years previous to the fellowship examinations.

Every Fellow obtaining one of the competitive fellowships, the income of which is $400 or over, must devote his whole time for one year to study in the department for which the fellowship is provided, under the direction of the professors in that department. He must reside in Princeton, unless by a vote of the Faculty he be allowed to study at an approved foreign university, in which case he shall

from time to time furnish written reports of his work to the professors in his department. The result of every examination and the reports of work done abroad shall be immediately returned to the Faculty. Any Fellow, resident in Princeton, shall when called upon perform such duties in the department to which he belongs as may be assigned to him by the President at the request of the professors in that department.

Chancellor Green Mental Science Fellowship

This fellowship, originally founded in 1870 upon the annual payment of $600 by the late Chancellor Henry W. Green, was permanently endowed in 1878 by a gift of $10,000 by his widow.

This fellowship is open to any member of the Senior Class who graduates. It is awarded, subject to the approval of the Faculty, by the full professors of the Department of Philosophy.

Class of 1873 Fellowship in English Literature

This fellowship was established in 1908 by the Class of 1873. It pays the holder the income of $15,000, and is open to any member of the Senior class of Princeton University, who graduates. It is awarded, subject to the approval of the Faculty, by the decision of the full professors of the English Department, either (1) upon a competitive examination, or (2) upon general excellence of the work done in English during Junior and Senior years. The purpose of the donors is to promote the study of English Literature in itself and in relationship to the literatures of the world, ancient and modern.

The E. M. Biological Fellowship

This fellowship conveys the use of a table in the Laboratory of the U. S. Bureau of Fisheries at Woods Hole, Mass., together with all the facilities afforded for the collection and

study of animal life during the season favorable for such investigations. A small stipend which varies from year to year is paid the holder. This amounted to not less than $150 during the year 1911-12. The fellowship is conferred by appointment of the Faculty.

Sayre Fellowship in Applied Chemistry

This fellowship was founded by the bequest of the late Dr. John Stanford Sayre, of the Class of 1878, and pays an annual stipend of $600.

Sayre Fellowship in Applied Electricity

This fellowship was founded by the bequest of the late Dr. John Stanford Sayre, of the Class of 1878, and pays an annual stipend of $600.

It will be awarded to that member of the Senior class in Princeton, who shall pass the best examination in general physics, general chemistry, and mathematics, including elementary differential equations. The examinations will be held in Princeton on or about June first.

The holder of the fellowship will be required to devote his entire time to work under the direction of the School of Electrical Engineering.

Note—Applications for the Sayre Fellowship in Applied Electricity and for the Orson Desaix Munn Fellowship in Electrical Engineering should be made to the School of Electrical Engineering.

GRADUATE SCHOLARSHIPS

James W. Queen Graduate Scholarship

This scholarship was founded in 1908 on a bequest of $5,000, by Mrs. Abby S. Queen. By action of the Faculty it has been assigned to the Department of Physics. The

incumbent of the scholarship shall be a regularly enrolled graduate student of the University, who is doing the principal part of his work in the Department of Physics. The nomination to the scholarship, by the terms of the bequest, is made by the executors of Mrs. Queen's estate. Applications for it should be made to the head of the Department of Physics.

THEODORE CUYLER GRADUATE SCHOLARSHIP

This scholarship was founded by the late C. C. Cuyler, of the class of 1879, and was constituted as a graduate scholarship in 1909. It pays the holder $200.

GARDNER GRADUATE SCHOLARSHIP

This scholarship is the gift of Mr. Russell Gardner and yields a stipend of $200. It is allotted to the Department of Mathematics and is open only to graduates of Princeton University.

GRADUATE COURSES OF INSTRUCTION

Any graduate course announced in the catalogue will be given, if applied for by any duly qualified graduate student.

The courses which are open to *graduate students only* are as follows:

PHILOSOPHY

A. Critical and Historical Survey of the general trend of philosophical and scientific thought. A course of lectures, one hour a week from October to April, with assigned collateral reading. Required of all candidates for the degree of Doctor of Philosophy. The President.

501, 502. The Philosophy of Kant. *The Critique of Pure Reason* will be read and systematically discussed. Occasional lectures will also be given. Both terms, 3

hours a week. [1913-1914 and alternate years.] Professor Kemp Smith.

503, 504. The Philosophy of Kant. *The Foundation of the Metaphysic of Ethics, The Critique of Practical Reason,* and *The Critique of Judgment* will be read and systematically discussed. Occasional lectures will be given. Both terms, 3 hours a week. [1912-1913 and alternate years.] Professor Kemp Smith.

505, 506. Experimental Psychology. Advanced laboratory course, consisting largely in research work, with weekly conferences for reports and discussion. Graduate students with sufficient training may substitute some special original investigation for the usual work of this course. Both terms, 3 hours a week. Professor Warren.

511. Theory of Mental Measurements. Lectures on the fundamental principles of psychophysical experimentation, with laboratory demonstrations and collateral reading. First term, 3 hours a week. Professor Warren.

515. Hedonism and the Ethics of Naturalism. First term, 3 hours a week. Professor G. S. Patton.

516. Self-realization and the Ethics of Idealism. Second term, 3 hours a week. Professor G. S. Patton.

517. History of English Ethics. First term, 3 hours a week. Professor G. S. Patton.

518. Problems in Contemporary Ethics. Second term, 3 hours a week. Professor G. S. Patton.

519, 520. The Philosophy of Evolution. In this course the purpose is to consider the philosophical problems involved in both the biological and psychological aspects of ontogenetic and phyletic development. Both terms, 3 hours a week. Professor Spaulding.

522. Schopenhauer and Nietzsche. Second term, 3 hours a week. Professor Fogel.

523. Masterpieces of Modern Philosophy. A study of characteristic works of modern philosophers, with lectures, consultations, theses and assigned reading. First term, 3 hours a week. Professor Ormond.

521. Philosophy of Education. An historical and psychological presentation of the principles of education. Lectures and conferences; reading of selected classics of education; theses on assigned topics. First term, 3 hours a week. Professor McComas.

525, 526. English Empiricism. An exposition and critical consideration of the theories of Locke, Hume, J. S. Mill, Spencer, and Lewes, with particular reference to their postulates, methods, and results. Both terms, 3 hours a week. Professor Whitney.

528. Recent Idealistic Theories of the World. Reading and systematic discussion of T. H. Green's metaphysics as found in his *Prolegomena to Ethics,* of Royce's *World and Individual* and *Conception of God,* and of parts of Bradley's *Appearance and Reality.* Second term, 3 hours a week. Professor Johnson.

529. Logic. A study of the results of the recent investigations in this field. First term, 3 hours a week. Professor Spaulding.

SEMINARY IN GENERAL PHILOSOPHY. Topic for the year to be chosen in view of the wants of the student. Conducted by reading, theses, and discussions. Both terms. Professor Kemp Smith.

PSYCHOLOGICAL SEMINARY. Conducted by reading, theses, and discussions. Topic to be determined in consultation with the class. Open to graduate students in philosophy and psychology. Both terms. Professor Warren or Professor Kemp Smith.

For undergraduate courses in Philosophy also listed as graduate courses, see page 276.

HISTORY, POLITICS, AND ECONOMICS

HISTORY

501, 502. A general course in the methods of historical research and bibliography. Professor Coney for Mediaeval History; Professor Shipman for Modern European History; Professor Corwin for United States History. This course is designed as an introduction to the advanced study of history. It comprises an account of the materials for historical research, an examination of the bibliographical tools most essential for the study of history in the three fields, and a discussion of the principles of historical criticism. After a few preliminary lectures the course will be divided into three sections each devoting itself to a particular field of study. The lectures will be accompanied by practical exercises. Both terms, 3 hours a week.

503, 504. Mediaeval Institutions. A study in the development of the political and ecclesiastical institutions of Western Europe from the Seventh to the Fifteenth Century. Both terms, 3 hours a week. Professor Coney.

505, 506. The Renaissance and the Reformation. Both terms, 3 hours a week. Professor Paul van Dyke.

507, 508. The French Revolution. A study of the political, diplomatic, constitutional and economic aspects of the period. A reading knowledge of French is required. Both terms, 3 hours a week, alternating yearly with courses 509, 510. [1912-1913.] Professor Shipman.

509, 510. Europe in the Nineteenth Century. The general course of European History since 1815 will be studied. Among the topics covered by the reading will be the revival of absolutism, the development of Liberal

opposition, the Revolutions of 1848, the growth of Nationalism and the new questions between Church and State. Both terms, 3 hours a week, alternating with courses 507, 508. [1913-1914.] Professor Shipman.

511, 512. Development of the British Empire in America. Both terms, 3 hours a week, alternating yearly with courses 513, 514. [1912-1913.] Professor Spencer.

513, 514. The Separation of the British Colonies from the British Empire. Both terms, 3 hours a week, alternating yearly with courses 511, 512. [1913-1914.] Professor Spencer.

515, 516, *a*. English Constitutional History. Origin of Anglo-Saxon system of government; the growth of English institutions; and the establishment of the leading features of the present constitution. Both terms, 3 hours a week, alternating with courses 515, 516, *b*. [1913-1914.] Professor Smith.

515, 516, *b*. Political and Social History of England under the Tudors, the Stuarts, and the Georges. This course is designed to cover the period from the Wars of the Roses through the Reform Bill of 1832. Both terms, 3 hours a week, alternating with courses 515, 516, *a*. [1912-1913.] Professor Smith.

517, 518. History of the United States from the formation of the Federal Government to the Compromise of 1850. A detailed study of the development of national life under the Federal Constitution. Critical investigation of certain disputed or obscure questions; with extensive reading and discussion of primary and secondary sources. Both terms, 3 hours a week. Professor McElroy.

519, 520. History of the United States, 1850-1898. Secession, the conduct of the war, reconstruction and na-

tional expansion. Special consideration of the constitutional, political and economic questions involved. Both terms, 3 hours a week. Professor Myers.

POLITICS

521. The Natural History of the State. An investigation of political and social origins. The course is based upon selected portions of Darwin's *Descent of Man* and is essentially a critical examination of the bearing of Darwinian doctrine upon the nature of society and government. The course involves a survey of the progress of research in the field of ethnology, particularly as regards primitive institutions. Lectures, selected readings, and discussions. First term, 3 hours a week. Professor Ford.

522. Modern Political Theories. Course 521 is a prerequisite to this course, which is a critical examination of the various schools of thought that sprang up from the scientific discoveries of the Nineteenth Century, purporting to be the application of naturalistic principles to politics and ethics. The doctrines of Comte, Marx, Spencer, Nietzsche and Galton are considered and particular attention is paid to the claims and spread of Socialism. Lectures, selected readings, and discussions. Second term, 3 hours a week. Professor Ford.

523, 524. International Law and Diplomacy. The first term will deal with diplomatic usage, the diplomatic history of the United States, and the part played by the United States in the development of International Law. The second term will be devoted to a study of cases. Both terms, 3 hours a week, alternating with courses 525, 526. [1913-1914.] Professor Elliott.

525, 526. The Theory of the State. The course will be both historical and critical. The first term will be de-

voted to the history of political theories with an analysis of the theories of some of the most important writers. The work of the second term will be devoted to an analysis and criticism of the modern theories of the state, with special consideration of the Federal State. Both terms, 3 hours a week, alternating with courses 523, 524. [Not given 1912-1913.] Professor Elliott.

527. (Classics 575.) Roman Private Law. Study of the Institutes of Gaius and Justinian, together with selected portions of the Digest. Special attention will be given to the sources of Early Roman Law; or to the law of Procedure in the time of Cicero; or to the law of Obligations, according to the needs of the individual student. A reading knowledge of Latin is necessary, and a reading knowledge of French and German very desirable for those taking this course. Those who have not had an elementary course in Roman Law will be obliged to take during first term the Senior course in Roman Law. First term, 3 hours a week. [1912-1913.] Professor Westcott.

529. Aristotle. The Athenian Constitution. In addition to the interpretation of the text extensive collateral reading will be assigned in the historians and in Plutarch. Topics in Athenian constitutional history and political institutions will be assigned for report, and members of the course will be encouraged to undertake original studies in these fields. First term, 3 hours a week. [1914-1915.] Professor Capps.

530. Aristotle. The Politics. An introduction to the political and economic writings of Aristotle and to the social and political thought of Greece. The whole of the work will be read with collateral readings in Plato's Republic and Laws. Second term, 3 hours a week. [1914-1915.] Professor Capps.

531. Roman Provincial Administration. A study of the Roman system of government and taxation in the provinces, based mainly upon Cicero's orations against Verres and his Letters from Cilicia, Pliny's correspondence with Trajan, and the inscriptions. This course is intended to supplement the research course in Roman Politics. First term, 3 hours a week. [Not given 1912-1913.] Professor Abbott.

532. Roman Municipal Administration. Political conditions in the cities under the Empire and municipal systems of government will be studied from the extant charters and from literature. Second term, 3 hours a week. [Not given 1912-1913.] Professor Abbott.

SEMINARY IN HISTORY. The Department of History, Politics, and Economics offers to graduate students a Seminary in American Constitutional History, both terms, to be conducted by Professor Corwin. [1912-1913.]

ECONOMICS

533. The Terminology of Economics: Origin and Growth. A study of the leading economic concepts up to and including John Stuart Mill's work. First term, 3 hours a week. Professor Fetter. [1912-1913.]

534. The Terminology of Economics: Contemporary Problems. An examination of the present divergent usage, with constructive criticism, and an essay in a positive and systematic terminology. Second term, 3 hours a week. Professor Fetter. [1912-1913.]

535. The Modern Theory of Distribution: Sources and Beginnings. An examination of the earlier statements of distributive theory in the light of the contemporary economic and political conditions. The

topic contemplated for this year is: Factors of production and shares of distribution. First term, 3 hours a week. Professor Fetter. [1913-1914.]

536. The Modern Theory of Distribution: Current Doctrines. The subject of the preceding course continued from about 1850 to the most recent discussions and solutions. Second term, 3 hours a week. Professor Fetter. [1913-1914.]

537. Labor Problems and Labor Organizations. A study of the history, politics, and influence of trade unions, especially in the United States. First term, 3 hours a week. Professor McCabe. [1912-1913.]

538. Taxation. A review of the fundamental principles, followed by a study of particular tax systems and problems. Second term, 3 hours a week. Professor Adriance. [1912-1913.]

539. The Organization of Industry. An examination of the growth of large industry, and of trusts and combinations. First term, 3 hours a week. Professor McCabe. [1913-1914.]

540. Accounting. A study of the theory and practice of accounting in private, corporate and in governmental business. Second term, 3 hours a week. Professor Adriance. [1913-1914.]

541, 542. History and Theory of Transportation. A survey of the improvements in methods and instruments of transportation and the consequent changes in the legal and economic theories relating thereto. Both terms, 3 hours a week. Professor Meeker. [1912-1913.]

543, 544. Money and Banking. An advanced course in the history and the theory of money and banking. Both terms, 3 hours a week. Professor Kemmerer. [1912-1913.]

ART AND ARCHÆOLOGY

501. Italian Sculpture. A study of sculpture in Italy from the fourth to the eleventh century. First term, 3 hours a week. Professor Marquand.

514. Italian Sculpture. A study of sculpture in Italy from the eleventh to the fifteenth century. Second term, 3 hours a week. Professor Marquand.

503, 504. Christian Architecture. A practical study of ecclesiastical architecture, from the fourth century to the twelfth, including the subjects of the construction, design, and details of the early Christian, Byzantine, and Romanesque periods, with exercises in drawing. Requires elementary knowledge of the history of Christian art and Mediaeval history, and ability to read French. Both terms, 3 hours a week. Professor Butler.

505. Renaissance Architecture. A practical study of the architecture of the Renaissance in Europe, with exercises in design. Requires knowledge of the elements of architecture; of shades, shadows, and perspective; and ability to read French. First term, 3 hours a week. Professor Butler.

517. Sienese Painters of the thirteenth and fourteenth centuries, with especial regard to the extension of the Sienese manner in Italy and France. Conferences and reports. First term, 3 hours a week. Professor Mather.

518. Leonardo da Vinci. A study of his artistic origins and development. His drawings will form the basis of the course, and his theories as expressed in his writings will be fully considered. Second term, 3 hours a week. Professor Mather.

519. Christian Symbolism and Iconography. This course treats the subject-matter of Christian Art during the Middle Ages, tracing the formation of symbols and

themes in the Early Christian period and their evolution through the Gothic to the beginning of the Renaissance. First term, 3 hours a week. Professor Morey.

520. Classical Numismatics. Lectures on Greek and Roman monetary systems and coin-types. Exercises in cataloguing based on the Museum collections. Second term, 3 hours a week. Professors Morey and Elderkin.

523. Etruscan Art. Conferences and reports on the sculpture, painting, and metal work of the Etruscans. First term, 3 hours a week. Professor Elderkin.

532. Olympia, Delphi, Epidaurus. A consideration of their topography and monuments. Second term, 3 hours a week. Professor Elderkin.

For the years 1913-1914 and 1914-1915 other courses will be substituted as occasion demands according to the following provisional schedule:

Given in 1913-1914.

515. Italian Sculpture of the fifteenth century. First term, 3 hours a week. Professor Marquand.

516. Italian Sculpture of the sixteenth century. Second term, 3 hours a week. Professor Marquand.

503, 504. Christian Architecture. Both terms, 3 hours a week. Professor Butler.

505. Renaissance Architecture. First term, 3 hours a week. Professor Butler.

525. Masaccio and the Florentine realists. First term, 3 hours a week. Professor Mather.

526. Early Flemish Painters. Second term, 3 hours a week. Professor Mather.

529, 530. Mediaeval Art. Both terms, 3 hours a week. Professor Morey.

507. Greek Archaeology. First term, 3 hours a week. Professor Elderkin.

502. Greek Vase Painting. Second term, 3 hours a week. Professor Elderkin.

Given in 1914-1915.

513. Problems in Greek Sculpture. First term, 3 hours a week. Professor Marquand.

524. Theory of Art. Second term, 3 hours a week. Professor Marquand.

503, 504. Christian Architecture. Both terms, 3 hours a week. Professor Butler.

505. Renaissance Architecture. First term, 3 hours a week. Professor Butler.

511. Giotto and his Associates. First term, 3 hours a week. Professor Mather.

512. The Bellini and Correggio. Second term, 3 hours a week. Professor Mather.

509. Early Christian Archaeology. First term, 3 hours a week. Professor Morey.

508. Roman Archaeology. Second term, 3 hours a week. Professor Morey.

507. Greek Archaeology. First term, 3 hours a week. Professor Elderkin.

534. Art Commentary on Greek Literature. Second term, 3 hours a week. Professor Elderkin.

For undergraduate courses in Art and Archaeology also listed as graduate courses, see page 276.

INDO-IRANIAN

501, 502. Elementary Sanskrit. Grammar, exercises, and reading, with comparison of sounds and forms with the Latin, Greek, and Germanic. This course is intended especially for students of the Classical and Germanic languages. The Sanskrit is taught from the comparative standpoint, and its relationship in sounds,

inflections, and syntax to the other Indo-European languages is emphasized. Geiger's *Elementarbuch der Sanskrit-Sprache* (Kaiser, Munich), Whitney's *Sanskrit Grammar,* Lanman's *Sanskrit Reader,* Thumb's *Handbuch des Sanskrits* (Winter, Heidelberg). Both terms, 3 hours a week. Professor Robbins. [1913-1914.]

503, 504. Advanced Sanskrit. Reading of classical and Vedic Sanskrit in the first and second terms respectively. Both terms, 3 hours a week. Professor Robbins. [1912-1913.]

Courses in Avestan, Gothic, Lithuanian, and Old Bulgarian will be given if they are called for.

CLASSICS

GREEK

501. Comparative Greek and Latin Grammar. A brief introduction to the study of phonetics and comparative philology; comparison of the sounds and inflections of the two languages. An elementary knowledge of Sanskrit is desirable, but not necessary. First term, 3 hours a week. Required of candidates for the Doctor's degree. Professor Robbins. [1912-1913.]

502, 503. Greek Composition. A practical course in the writing of Greek prose, accompanied by a review of Greek forms and syntax. One hour in weekly conferences throughout the year. Professor Hutson. [1913-1914.]

Given in alternate years with Latin Composition and required of candidates for the Doctor's degree.

505. Attic Orators. A study of the beginnings and development of Attic Oratory, excluding Demosthenes. Assigned readings in Antiphon, Andocides, Lysias, Isaeus, Isocrates, Aeschines. Collateral reading and

reports. First term, 3 hours a week. Professor Hutson. [1912-1913.]

510. Demosthenes. Private Orations. The private orations will be interpreted, with discussion of typical questions of Athenian private law. Second term, 3 hours a week. Professor Capps. [1912-1913.]

512. Pindar and Bacchylides. The extant poems of both poets will be interpreted and certain of them critically studied. The course is designed to give a practical introduction to Greek metrics. Second term, 3 hours a week. Professor Capps. [1913-1914.]

513. Aristotle. The Athenian Constitution. In addition to the interpretation of the text, collateral reading will be assigned in the historians, in Plutarch, and in the inscriptions. Topics in Athenian constitutional history and political institutions will be assigned for report, and members of the course will be encouraged to undertake original studies in these fields. First term, 3 hours a week. Professor Capps. [1914-1915.]

514. Aristotle. The Politics. An introduction to the political and economic writings of Aristotle and to the social and political thought of Greece. The whole of the work will be read with collateral reading in Plato's Republic and Laws. Second term, 3 hours a week. Professor Capps. [1914-1915.]

515, 516. Greek Comedy. The course of development of comedy will be followed from the beginnings down to the perfected New Comedy. The plays of Aristophanes will first be rapidly reviewed, with a detailed study of their structure and technique. Especial attention will be paid to the early period and to the two great periods of transition. Reports upon articles, monographs, and individual poets will be called

for and topics in dramatic technique, literary history and chronology will be assigned for investigation. Both terms, 3 hours a week. Professor Capps. [1914-1915.]

521. Homeric Antiquities. Lectures will be given on the general subject. Special topics will be studied, such as the Homeric state and institutions, houses and furniture, dress and private life, slavery, trade and crafts, war and weapons, religion and worship. Reports will be heard from the members of the class. First term, 3 hours a week. Professor Prentice. [1912-1913.]

522. Topography of Attica. This course will deal primarily with the topography of Athens and of Attica. The first book of Pausanias will be read and studied critically, with special reference to the problems concerning the city wall before and after Peisistratus, the temples of the acropolis, the precincts of Dionysus, the Pnyx and Agora. Reports will be read by members of the class on various topics. Lectures will be given on the life of Pausanias, his sources and the value of his book not only with reference to Archaeology in general but also to Mythology and History. Second term, 3 hours a week. Professor Prentice. [1912-1913.]

523. Thucydides. Selections from the text will be edited by the members of the class, with introductions, and textual, grammatical and exegetical commentaries. Lectures will also be given by the instructor, and reports by the members of the class will be presented, dealing with Greek historical literature in general, and with the life of Thucydides, his sources and methods, his influence in ancient and modern times, and the literary and historical value of his work.

First term, 3 hours a week. Professor Prentice. [1913-1914.]

524. Greek History. Lectures will be given on Greek History, beginning with the earliest times and extending as far as the limits of the course permit. Special attention will be paid to the sources for Greek history and to the methods of historical criticism. Second term, 3 hours a week. Professor Prentice. [1913-1914.]

525, 526. The Greek Theatre. The general field of Greek scenic antiquities will be covered by lectures and reports; but attention will be directed particularly to unsolved problems in connection with the history and structure of the theatre, technical terms, scenic appliances, the dramatic contests, and the like. The course will be given a practical bearing by the scenic analysis of a number of plays by each member of the class. Both terms, 3 hours a week. Professor Capps. [1913-1914.]

527. Introduction to the Principles and Methods of Text Criticism. Portions of a single play of Euripides will be critically interpreted by the instructor and by members of the class in turn. Occasional lectures by the instructor on the aims and methods of textual criticism and interpretation; practical exercises in the construction of an apparatus criticus. First term, 3 hours a week. Professor Capps. [1912-1913.]

530. Greek Dialects. A study of the sounds and forms of the various dialects, on the basis of the dialect inscriptions. Buck's *Greek Dialects* will be used as an introduction to the work. Second term, 3 hours a week. Professor Robbins. [1912-1913.]

This course alternates with that on the Italic Dialects.

533. Arrian and the Sources of the History of Alexander. A critical study of Alexander's conquests. The ancient authors dealing with the subject will be read with a view to comparing their accounts with one another, and to discovering the different lines of tradition. The origin and development of the *vulgata* will be traced. First term, three hours a week. Professor Prentice. [1914-1915.]

534. Greek Inscriptions. Lectures will be given on the history of classical epigraphy, the alphabet, and the methods of interpretation. Practical exercises will be held in reading from casts and squeezes. Inscriptions of especial historical value, chiefly those of the fifth century, will be interpreted and discussed. Second term, 3 hours a week. Professor Prentice. [1914-1915.]

535, 536. Greek Tragedy. The beginnings of tragedy and the course of its development will be treated in lectures, with consideration of the legendary material, the external conditions in which tragedy arose, the dramatic and scenic adjustment of its parts, the language and meters, and the history of our texts. The course will involve the reading and analysis of a number of tragedies by each member of the class and a general survey of all the extant plays by the instructor. Both terms, 3 hours a week. Professor Capps. [1912-1913.]

LATIN

501. Comparative Greek and Latin Grammar. See page 241.

541, 542. Latin Composition. A practical course in the writing of Latin prose, accompanied by a review of Latin forms and syntax. The exercises will be based on Cicero's Laelius, and will consist of continuous

passages in argumentative and essay style. One hour in weekly conferences throughout the year. Professor Basore. [1912-1913.]

Given in alternate years with Greek Composition, and required of all candidates for the Doctor's degree.

544. The works of Caesar and his continuators: a course intended primarily for those who intend to teach in secondary schools. Second term, 3 hours a week. Professor Westcott. [1912-1913.]

545, 546. The Life and Works of Cicero. A study will be made of the order and circumstances of the composition of the writings of Cicero, and the significance of Cicero in literary and political history. Reports on representative works will be prepared by members of the class and submitted for general discussion. Both terms, 3 hours a week. Professor Magie. [1913-1914.]

547, 548. Lucretius. Reading of the *De Rerum Natura* with intensive study of selected portions. Both terms, 1 hour a week. Professor Basore.

549, 550. Virgil. The works of Virgil and the *Appendix Vergiliana* will be studied chiefly in their literary aspects. Attention will be paid to the poet's motives, sources, technique, and his influence on subsequent literature. Lectures and interpretations; reports on topics of Virgilian criticism. Both terms, 3 hours a week. Professor Stuart. [1913-1914.]

552. Livy. Study of the credibility, sources, methods, and purpose of the History, and the development of the author's style. The results of study will be embodied in weekly reports. In 1913-1914 the work will be based on the first decade. Second term, 3 hours a week. Professor Westcott. [1913-1914.]

553. Plautus. The course will deal, on the literary side, with dramatic form, character-drawing, diction, and style; on the linguistic side, with vocabulary, metrical treatment, and ante-classical forms and constructions. First term, 3 hours a week. Professor Abbott. [1913-1914.]

554. Tacitus. Reading of the whole of the author's works so far as not previously read. Study of date, sources, method and purpose of each work, and of the development of the author's style in his successive periods. Results of study to be embodied in weekly papers. Second term, 3 hours a week. Professor Westcott. [1914-1915.]

555, 556. Alexandrian Influence in Roman Poetry. This course will include a general survey of Alexandrian forms and tendencies in poetry and of their adaptation by the Roman poets of the Late Republic and the Early Empire. The works of Catullus and of the Elegiac Poets will be the objects of especial study. May be elected for the first term or for both terms, 3 hours a week. Professor Stuart. [1914-1915.]

560. Early Latin. Allen's *Remnant's,* Merry's *Fragments of Roman Poetry,* and Bücheler's *Carmina Epigraphica.* The object of the course is especially to give some clear and ordered knowledge of the beginnings of Roman literature. The treatment will be mainly philological and literary. Second term, 3 hours a week. Professor Abbott. [1913-1914.]

558. Italic Dialects. Buck's *Grammar of Oscan and Umbrian* will be used. The aim of the course will be the historical and comparative study of these dialects in their relations to Latin. Second term, 3 hours a week. Professor Robbins. [1913-1914.]

559. Roman Biography. The origin and the development

of ancient biographical writing will be studied with especial reference to the literary and rhetorical aspects. The literary and the imperial biographies of Suetonius, the Agricola of Tacitus, and certain Vitae found in the Scriptores Historiae Augustae will be subjected to analysis and criticism. First term, 3 hours a week. Professor Stuart. [1912-1913.]

560. Ancient Literary Criticism. Lectures on the history of critical thought in antiquity. Reading and discussion of Aristotle's *Poetics,* Horace's *Art of Poetry,* Aristotle's Rhetoric, Book III; Demetrius *On Style,* Dionysius *On Literary Composition,* Longinus *On the Sublime;* Quintilian, Book X. Second term, 3 hours a week. Professor Harmon. [1912-1913.]

562. Ancient Rhetoric. Lectures on the development of rhetorical theory. Interpretation and illustration of Quintilian's *Institutio Oratoria.* Study of rhetorical practice as exemplified in the Attic orators and in Cicero; of the influence of rhetoric on literature. Second term, 3 hours a week. Professor Harmon. [1913-1914.]

563, 564. The Latin Romance. Attention will be directed in the main upon Petronius and Apuleius. The purpose of the course will be to study the origin, the history, and the characteristics of the Latin Romance. Papers will be presented from time to time by the members of the class. Both terms, 3 hours a week. Professor Abbott. [1912-1913.]

567. Latin Inscriptions. A large number of inscriptions will be read and interpreted from the printed text and from squeezes; special historical topics will be taken up for investigation, and a thorough working knowledge of the contents of the *Corpus Inscriptionum Latinarum* will be acquired. First term, 3 hours a week. Professor Abbott. [1912-1913.]

568. Palaeography. General and applied. Introduction to the psychology, mythology, and history of ancient writings; the material and form of books, the evolution of alphabetic writing, the science and method of textual and higher criticism. Application in the field of Latin codices, with practice in decipherment, dating, and the method of research; including search for the manuscripts, exercise in the description and collation of manuscripts and the formation of genealogical tables, the discrimination of documents and voluntary variations. Second term, 3 hours a week. Dr. Richardson. [1912-1913.]

†569. Historians of the Roman Empire. A study will be made of the sources used by the various historians in compiling their works, of their methods in dealing with these sources, of the literary and political influences under which they wrote, and of the tendencies exhibited in their works. Papers on these subjects will be prepared by members of the class and submitted for discussion. First term, 3 hours a week. Professor David Magie, Jr. [1914-1915.]

573. History of the Early Roman Empire. The sources for the history of the Early Roman Empire will be critically examined and discussed, and the historical material thus obtained will be combined into a history of the period presented in reports by members of the class. First term, 3 hours a week. Professor David Magie, Jr. [1912-1913.]

571. Roman Provincial Administration. A study of the Roman system of government and taxation in the provinces, based mainly upon Cicero's orations against Verres and his letters from Cilicia, Pliny's correspondence with Trajan, and the inscriptions. This course is intended to supplement the Research

† A course in Roman Public Law will be given instead of this course.

Course in Roman Politics. First term, 3 hours a week. Professor Abbott. [Not given 1912-1913.]

572. Roman Municipal Administration. Political conditions in the cities under the Empire and municipal systems of government will be studied from the extant charters and from literature. Second term, 3 hours a week. Professor Abbott. [Not given 1912-1913.]

574. Research Course in Roman Politics. The political history of the years 62-57, 49-48, and 44-43 B.C. will be studied from the sources; the careers of the leading politicians of those years will be followed, and the character and purpose of the several political parties will be examined. Second term, 3 hours a week. Professor Abbott. [1912-1913.]

575. [Hist., Pol. and Econ. 527.] The Private Law Orations of Cicero. A study of the legal institutions of the time of Cicero. First term, 3 hours a week. Professor Westcott. [1912-1913.]

577. [Hist., Pol. and Econ. 527.] Sources of Early Roman Law. Bruns: *Fontes Iuris Romani Antiqui* and Lindsay: *Latin Inscriptions* will be used. This course alternates yearly with the preceding. First term, 3 hours a week. Professor Westcott. [1913-1914.]

579, 580. Colloquial Latin. The object of the course will be to investigate some of the characteristics of colloquial Latin in the matter of lexicography, pronunciation, syntax and style, and to determine to some extent the relation of colloquial to literary Latin, as well as its connection with archaic Latin on the one hand and with the Romance languages on the other. Both terms, 3 hours a week. Professor Abbott. [1913-1914.]

582. General Course in Classical Philology. Such topics

will be briefly treated in lectures and in reports by students as the history of classical philology; the relation of the several fields to one another, the transmission and reconstruction of classical texts, the formation and use of a critical apparatus, the making of a lexicon, and the method to be used in testing the historical sources for a given period. Second term, 3 hours a week. Professor Abbott. [Not given 1912-1913.]

587, 588. Augustine and Patristic Latin. The *De Civitate Dei* will be read. Special attention will be given to its literary sources, argument, historical and philosophical bearings, and its relation to the other writings of Augustine. If time permits, other writings of Augustine, the *Apologeticus* of Tertullian and the *Octavius* of Minucius Felix will be read. Both terms, 3 hours a week. Dean West. [1914-1915.]

589, 590. Early Mediaeval Histories. The following writings will be studied: Iordanes: *Getica;* Eugippius: *Vita Sancti Severini;* Beda: *Historia Ecclesiastica;* Einhard: *Vita Caroli Magni;* Alcuin: *Epistles.* Both terms, 3 hours a week. Dean West. [1912-1913.]

591, 592. Later Mediaeval Literature. Reading and interpretation of writers selected to illustrate various aspects of the later mediaeval Latin and the history and literature of the times. The books proposed for reading are John of Salisbury: *Policraticus;* Roger Bacon: *Opus Majus;* Adam of Hamburg: *Descriptio Insularum Aquilonis;* Arnoldus: *Chronica Slavorum;* Richard de Bury: *Philobiblon.* Both terms, 3 hours a week. Dean West. [1913-1914.]

For undergraduate courses in Classics also listed as graduate courses, see page 277.

ENGLISH

502. Historical English Grammar. In this course there will be lectures and reports on (a) the development of language in general, and (b) the development of the English language in particular. The course presupposes an acquaintance with Old and Middle English, equivalent to that offered in courses 304, 405, and 406. Students who have not such an acquaintance are referred to the note at the end of this outline of courses. Second term, 3 hours a week. Professor Spaeth.

505. Old English Poetry. This course will consist in either: (a) a critical reading of *Beowulf* with study of its historical backgrounds and of Germanic culture; or (b) an investigation of the heroic epic in Germanic literature, with special reference to the bearing of the main cycles on Old English literature. The Scandinavian and Old and Middle High German epics may be read in translation, but the Old English material is studied in the original. Epic stories, like that of the *Nibelungen Lied,* may be traced through various forms down to their treatment in modern times. First term, 3 hours a week. Professor Spaeth.

506. Old English Poetry. The influence of European culture, particularly that of the church, on the development of Old English literature will be the main object of investigation in this course. The blending of native and foreign elements will be illustrated by critical reading of the poems of the Junian MS. or of the Cynewulfian school, and by study of their relationship to their sources and to the heroic epic. Second term, 3 hours a week. Professor Gerould.

507, 508. Ælfred and his Times. The object of this course is to give a general survey of West-Saxon literature,

Latin and native, from its inception to the Conquest, and to devote especial attention to the writings attributed to Ælfred or inspired by him. The figure of Ælfred, and its influences on his time, will receive particular consideration. Both terms, 3 hours a week. Professor Miles.

509. Middle English Romances. The rise of the romance in England will be studied as a literary movement. Its relations to the epics and folk-tales of Germanic and Celtic origin, to the literature of France, and to mediaeval ideals of life, ecclesiastical and courtly, as well as special topics in historical and textual criticism, will be investigated by the students. First term, 3 hours a week. Professor Gerould.

510. Middle English Romances. The object of this course is to furnish illustration of the transformation of the ancient heroic epos in the Middle Ages by a comparison of a number of representative Middle English versions of the stories of Troy, Thebes, and Alexander with their classical prototypes. Second term, 3 hours a week. Professor Griffin.

511, 512. Chaucer. The aim of the course is to give the student a thorough acquaintance with Chaucer's writings and with the literature of Chaucerian scholarship. Among the topics considered are: the collation and affiliation of manuscripts and the construction of a critical text; tests for determining the genuineness of works attributed to the poet; the chronology of his writings and the methods of determining it; contemporary literature in France, Italy, and England; Chaucer as typical of the later Middle Ages. Both terms, 3 hours a week. Professor Root.

513. The Troy Romance. An intensive study will be made of the English Troy romance, with special ref-

erence to the development of the *Troilus and Cressida* story. First term, 3 hours a week. Professor Griffin.

514. The Beginnings of the English Drama. Miracle plays, moralities, and the rise of comedy and tragedy to Lyly and Marlowe. The purpose of this course is to give a general survey of the mediaeval drama in England and the emergence of the Renaissance drama in the sixteenth century. Second term, 3 hours a week. Professor Kennedy.

515, 516. The Renaissance in England with especial reference to Spenser and Bacon. A study of the poetry and genius of Spenser, especially as modified and determined by humanism and the Italian Renaissance, and by the combination of these influences with the surviving culture of the Middle Ages. The nature of Spenser's enthusiasm for Italian and classical literature, philosophy, and art, and his knowledge and use of them. Spenser as typical of the Renaissance in his times. Some attention to Bacon as manifesting certain more literal and prosaic phases of Renaissance culture than does Spenser. Both terms, 3 hours a week. [1912-1913, and alternate years following.] Professor Osgood.

517, 518. Elizabethan Drama. The exact nature of this course varies from year to year, according to the needs of the students taking it. The object is to obtain a first hand knowledge of the chief figures and main types in the drama from 1500 to 1642. Sometimes one dramatist is taken as a centre around which the work is grouped; sometimes several dramatists are taken up in turn, one being assigned to each member of the class for special study; sometimes the development of one form of drama, as romantic tragedy or realistic comedy, is studied in the works of various

dramatists. Both terms, 3 hours a week. Professor Parrott.

519. Shakespeare. The purpose of this course is to introduce the student to the criticism and interpretation of the text of Shakespeare. A single play, such as *Hamlet, Macbeth,* or *Romeo and Juliet,* varying from year to year, is made the basis of study. First term, 3 hours a week. [1912-1913, and alternate years following.] Professor Parrott.

521, 522. English Literary Prose in the Sixteenth and Seventeenth Centuries. The course begins with Malory and ends with Dryden, and is literary and historical in character rather than philological. It aims to show the successive development of various literary styles and forms, partly under the influence of models in Classical, French, Italian, and Spanish literature, partly as expressing the spirit of the age and the thought and life of England. Both terms, 3 hours a week. Professor Croll.

523, 524. Milton. The chief cultural forces of Milton's time, especially those which combined in his own character and training; his achievements in prose and poetry, with reference to their origins, forms, artistic and ethical values, etc.; his significance in English political and literary history. Both terms, 3 hours a week. [1911-1912, and alternate years following.] Professor Osgood.

525. The Influence of the French Revolution on Wordsworth and Coleridge. A study of the relations between these poets, particularly in their youth, and the contemporary leaders of thought in France. First term, 3 hours a week. [1912-1913 and alternate years following.] Professor Harper.

527. History of Literary Criticism. A study of the chief theories of criticism, ancient and modern, particular

attention being paid to the modern developments in French, German, and English. First term, 3 hours a week. [1911-1912, and alternate years following.] Professor Harper.

Aside from the courses described above, special arrangements will be made for instruction in old English during the first term of graduate students who have not had the equivalent of the undergraduate courses 404 and 405. Graduate students are permitted to follow the senior courses in the literature of the eighteenth and nineteenth centuries, conducted by Professors Axson and van Dyke, provided that they fulfill certain stipulated requirements. They may also, in certain cases, be permitted to enter the English Pro-Seminary, which is open to qualified members of the Senior class.

For undergraduate courses in English also listed as graduate courses, see page 277.

MODERN LANGUAGES

GERMANIC

502. Historical German Grammar. Introduction, phonology, morphology. Requires a knowledge of Gothic, Old High and Middle High German. Lectures. References to Paul: *Grundriss der Germanischen Philologie;* Streitberg: *Urgermanische Grammatik.* Second term, 3 hours a week. Professor Hoskins. [1913-1914.]

503. Gothic. Grammar, reading and lectures. Papers based on investigations of special subjects. This course will be comparative in its methods and will aim to furnish additional equipment for the study of Germanic and Indo-European grammar, phonetics, syntax and etymology. Knowledge of modern German required. Braune: *Gotische Grammatik:* Stamm-

Heyne: *Ulfilas.* First term, 3 hours a week. Professor Bender. [1912-1913.]

501. Old High German. Grammar, reading, and lectures on the historical development of the German language. Knowledge of modern German and Middle High German required, and some knowledge of Gothic useful. Braune: *Althochdeutsches Lesebuch;* Braune: *Althochdeutsche Grammatik.* First term, 3 hours a week. Professor Hoskins. [1913-1914.]

509. Middle High German. Grammar, lectures, and reading. The course is designed both to furnish a foundation for the historical study of modern German and to serve as an introduction to the study of Germanic philology. Proficiency in modern German is required. Paul: *Mittelhochdeutsche Grammatik;* Michels: *Mittelhochdeutsches Elementarbuch;* Weinhold: *Mittelhochdeutsches Lesebuch.* First term, 3 hours a week. Professor Hoskins. [Not given 1912-1913.]

513. General Phonetics as an Introduction to Indo-European Phonology. Lectures on the physiological basis of sounds, on the Indo-European vowels, consonants and diphthongs and their classification and development through the various Indo-European languages, especially the Germanic. Practical application will be made constantly to modern English and German. First term, 3 hours a week. Professor Bender. [1913-1914.]

514. Lithuanian. Introduction to the language and literature. Grammar studied comparatively. Selections read from Donalitius' Seasons, and from the folksongs (Dainos). Lectures on general subjects, including the influence of German on Lithuanian. Knowledge of German required. Wiedemann: *Handbuch der litauischen Sprache.* Second term, 3 hours a week. Professor Bender. [1912-1913.]

511, 512. Old Icelandic. Grammar, lectures, and reading. For advanced students. Noreen; *Altisländische und Altnorwegische Grammatik;* Kahle: *Altisländisches Elementarbuch;* Ranisch: *Die Volsungasaga;* Sijmons: *Die Lieder der Edda.* Both terms, 3 hours a week. Professor Priest. [1913-1914.]

507, 508. Advanced German Composition. A practical course in the writing of German prose, accompanied by a review of German syntax. Both terms, 1 hour a week in weekly conferences. Professor Blau.

505, 506. History of the Drama in Germany. The theory and technique of the drama. The rise and development of the mediaeval drama in Germany. The popular drama and the school drama in the sixteenth and seventeenth centuries. French and English influences in the eighteenth century. The drama of the classical and romantic periods. Hebbel and the modern drama. Both terms, 3 hours a week. Professor Beam. [1913-1914.]

517, 518. History of Lyric Poetry in Germany. The course will trace German lyric poetry from its earliest beginnings through Minnesang, Meistersang, and early Volkslied, Protestant Religious Poetry, and the "Renaissance" to the lyric of the great century of German literature. Here the great masters will be taken up; and the several schools and groups, especially the Early and Late Romanticists, the Swabians, Young Germany, and the Munich group, will be studied. In conclusion the Lyric of the second half of the nineteenth century will be treated. Both terms, 3 hours a week. Professor Blau. [1912-1913.]

515, 516. History of the Novel in Germany. This course will treat of the development of prose fiction in Germany. The early prose romances, the Volksbücher,

the pastoral, heroic, and picaresque novel, the humorous, philosophical, sentimental, and romantic novel of the eighteenth and early nineteenth centuries, the origin and growth of the realistic novel, studies in recent German fiction. Both terms, 3 hours a week. Professor Thayer. [1913-1914.]

523. The Beginnings of New High German Literature. A study of the history and development of German literature during the Reformation period and to the time of Opitz: Luther, Hans, Sachs, Brant, Fischart. Lectures and assigned reading. First term, 3 hours a week. Dr. Braun. [1912-1913.]

504. German Literature since 1885. An investigation of the chief elements in the poetry, novel and drama of the last generation. Lectures, reading, and the preparation and discussion of papers on individual authors and their works. Second term, 3 hours a week. Professor Priest. [1912-1913.]

ROMANIC

519, 520. French Historical Grammar. Two lectures will be given each week on the phonological and morphological development of the French language from the earliest period to the present. In addition to the lectures one hour a week will be devoted to an etymological study of several of the earlier Old French texts. Students who have not already a reading knowledge of Old French should take at the same time the undergraduate course in Old French. Both terms, 3 hours a week. Professor Buffum.

521, 522. Advanced French Composition. This course will aim to give a practical as well as a scientific knowledge of French. It will consist of written translation of graded difficulty from English into French and of occasional writing of essays in French.

Both terms, 1 hour a week. Professor Michaud.

524. French Dialects. The dialects of northern France, or of the *Langue d'Oïl,* will be traced from the earliest monuments to the present day. Introductory lectures will be given on the general theories of the origin and growth of dialects, especially with reference to the Romance group. The geographical position, phonology, morphology, and literature of the individual dialects of northern France will then be considered, especial attention being given to the study of representative texts. A knowledge of Old French is required. Second term, 3 hours a week. Professor Buffum. [1913-1914.]

526. The French National Epic. A study of the Chansons de Geste with reference to their origins and the development of the earlier epic material. An examination of the most important specimens in the three main divisions of the Chansons de Geste, the royal, feudal and provincial groups. Second term, 3 hours a week. Professor Critchlow. [1912-1913.]

525. Provençal. The course will consist of a study of the conditions under which Provençal literature flourished, of the phonology, morphology and syntax of idiom, and of the reading of selected texts. First term, 3 hours a week. Professor Mathews. [1912-1913.]

527. Molière. After a brief introductory study of the earlier comedy, this course takes up in detail the works of Molière. One or two of his masterpieces are studied critically with reference to language, sources and bearing on contemporary life. First term, 3 hours a week. Professor Koren. [1912-1913.]

528. Voltaire and his Time. This course will consist of a study of Voltaire's principal works in poetry and

prose, implying a critical study of Voltaire's editions, with emphasis on the historical relations of his books to his time. The course is conducted in French. Second term, 3 hours a week. Professor Michaud. [1912-1913.]

529, 530. The Development of Literary Criticism in France. Beginning with a consideration of the status of criticism in the Italian Renaissance, its real and supposed sources, its principles, method, and authority, the course will cover in detail French critical writing from Du Bellay to the present, first tracing the application and development of the classic and pseudo-classic principles to French literature, and then attempting to discover as they appear new principles and methods. Both terms, 3 hours a week. Professor Gauss. [1913-1914.]

531. The Classic Spanish Drama. A study of the development of the drama in Spain from its origin to the death of Calderon. The student will be assigned special subjects for reading and investigation, on which reports will be required. First term, 3 hours a week. [1913-1914.]

532. The Spanish Novel. A study of the origins and development of prose fiction in Spain. The influence of the Spanish novel upon that of England and France. Second term, 3 hours a week. [1913-1914.]

534. Folk-Latin. This course will begin with a brief historical sketch of the Romance nations from the time of Roman colonization. The Roman and the Teutonic elements in Romance civilization will be contrasted. The phonology, morphology, and syntax of Folk-Latin will then be traced from the earliest period to the rise of the Romance literatures. Especial attention will be devoted to the contrast between Folk-

Latin and Classic Latin and to the Folk-Latin background of the Romance languages. Second term, 3 hours a week. Professor Buffum. [1912-1913.]

533. French Syntax. This course will aim to give an historical and exhaustive survey of the field of French syntax, special attention being paid to the origin, development, and analysis of constructions that have become established in modern French. A knowledge of French phonology and morphology, and ability to read Old French are required. First term, 3 hours a week. Professor Mathews. [1913-1914.]

535. The Breton Epic through the Twelfth Century. The poems of Chrétien de Troyes, Raoul de Houdenc and their successors; mediaeval history of Arthur from Latin and Old French sources. Modern theories of the origin of the Arthurian romances. First term, 3 hours a week. Professor Critchlow. [1912-1913.]

537. The Legend of Tristan and Iseult. The fragments of Béroul and Thomas, known as the Arthurian and English versions respectively; a study of these poems and the process of their adoption into European literatures during the twelfth and thirteenth centuries. First term, 3 hours a week. Professor Critchlow. [1913-1914.]

538. History of the Novel in France. This course will consist of reading, lectures, and the preparation and discussion of papers, treating of various phases of the seventeenth, eighteenth and nineteenth centuries. Second term, 3 hours a week. Professor Vreeland. [1913-1914.]

539, 540. Old Spanish Readings. This course also includes a study of the phonology, morphology, and historical syntax of the Old Spanish language. Text books: Ford's *Old Spanish Readings* and Menendez

Pidal's *Grammática Histórica Española.* Both terms, 3 hours a week. [Not given 1912-1913.]

541. Romantic Drama of the Renaissance. A study of the development of the drama in Italy, France, and Spain in the sixteenth and early seventeenth centuries. First term, 3 hours a week. Professor Stuart. [1913-1914.]

542. The Epic of Antiquity to the year 1180 A.D. An investigation of the transition period between national and court epic poetry together with an analysis of the poems embodying the matter of Rome. The romances of Alexander, Troy, Aeneas, Thebes and the Eracle of Gautier d'Arras constitute the working basis of the course. Second term, 3 hours a week. Professor Critchlow. [1913-1914.]

543, 544. Romanticism. A study in the origins and the development of the romantic tendencies in French literature. Beginning with a discussion of the status of lyricism and nature poetry, and an examination of the essential elements in the constitution of the French classical school, the course takes up in detail the work of the dissenters, the quarrel of the Ancients and Moderns, and the gradual codification of this dissent into a new literary creed. Both terms, 3 hours a week. Professor Gauss. [1912-1913.]

546. Italian. The Minor Works of Dante. A study of the *Vita Nuova,* the *Convito,* and the *Canzoniere,* together with lectures on the life and times of Dante. Second term, 3 hours a week. Mr. Moseley. [1912-1913.]

The Senior courses in Old French and in Middle High German may, by special permission, be taken as graduate courses.

Also, by special permission, a graduate course scheduled for 1913-1914 may be given in 1912-1913.

MATHEMATICS

The following Graduate Courses are offered for the year 1912-1913.

501. Theory of Substitutions. Elementary theory of substitutions. Groups of substitutions and rotations. Application of the theory of groups to the solution of algebraic equations. First term, 3 hours a week. Professor Gillespie.

533, 534. Theory of Functions of a Complex Variable. An introductory course. Both terms, 3 hours a week. Professor Wedderburn.

525, 526. Differential Geometry. An introductory course. Both terms, 3 hours a week. Professor Eisenhart.

523. Analytic Projective Geometry. Invariants and covariants of binary forms. Clebsch's symbolic notation. Theory of higher plane curves. First term, 3 hours a week. Professor Hun.

529, 530. Infinitesimal Geometry. Historical readings from some of the memoirs of Monge, Dupin, Gauss, Weingarten, Darboux and Bianchi. Both terms, 3 hours a week. Professor Thompson.

519. Calculus of Variations. Historical examples. General theory. Isoperimetric problems and problems in space. Double integrals. First term, 3 hours a week. Professor Swift.

520. Partial Differential Equations. Second term, 3 hours a week. Professor Wedderburn.

531, 532. (Physics 505, 506.) Analytical Mechanics, or Hydrodynamics and Elasticity. Both terms, 3 hours a week. Professor Adams.

SEMINARY. Both terms. Professor Veblen. Lectures on outstanding problems in some particular field of mathematics together with reports by students on special topics belonging to this field.

The following courses were given in 1911-1912 or in previous years. It is the intention of the Department to repeat them periodically.

502. Theory of Invariants. The theory of invariants and covariants of binary quantics, developed in the symbolic notation of Clebsch. Second term, 3 hours a week. Professor Gillespie.

504. Linear Groups and Invariants. Second term, 3 hours a week. Professor Veblen.

505. Theory of Elimination. First term, 3 hours a week. Professor Fine.

506. Galois Theory of Algebraic Equations. Second term, 3 hours a week.

508. Theory of Matrices. Second term, 3 hours a week. Professor Wedderburn.

509, 510. Theory of Functions of Real Variables. A critical study of differential and integral calculus, with applications to the elementary functions and current problems of analysis. Both terms, 3 hours a week. Professor Veblen.

511. Theory of Algebraic Numbers. First term, 3 hours a week. Professor Fine.

512. Theory of Functions of a Complex Variable. An advanced course. Second term, 3 hours a week.

513. Linear Differential Equations. Existence theorems. Real variables: oscillation properties of second order equations, boundary value and expansion problems, related integral equations. Complex variables: the hypergeometric equation. First term, 3 hours a week.

515, 516. Differential Equations of Physics. Both terms, 3 hours a week.

517. Linear Partial Differential Equations of the Second Order. Existence theorems for the various cases. Nature of the solutions. Boundary value and expansion problems. First term, 3 hours a week.

521, 522. Projective Geometry. Advanced course. Both terms, 3 hours a week. Professor Veblen.

527, 528. Differential Geometry. An advanced course in special topics. Prerequisite: courses 525, 526. Lectures and conferences. Both terms, 3 hours a week. Professor Eisenhart.

536. Vector Analysis. An introductory course. Second term, 3 hours a week. Professor Eisenhart.

For undergraduate courses in Mathematics also listed as graduate courses, see page 277.

ASTRONOMY

501, 502. Theoretical Astronomy. Reading course. Calculations of Orbits. Watson; Oppolzer; Bauschinger. Both terms, 3 hours a week. Professor Russell.

503, 504. Practical Astronomy. Theory of instruments. Study of the determination of time, latitude, and azimuth; work with the equatorial on double stars, variable stars, and the sun. Both terms, 3 hours a week. Professor Dugan.

505. Theory and Method of Reduction of Photographic Star Plates. Determination of star-places from photographic plates; stellar parallax, and proper motion. First term, 3 hours a week. Professor Russell.

506. Spectroscopy. The theory and use of the spectroscope as an implement of astronomical investigation, with practical work in the observatory. Second term, 3 hours a week. Professor Russell.

507, 508. Celestial Mechanics. An introduction to the general problems of the motions of the heavenly bodies. Lectures and collateral readings in the treatise of Tisserand. Both terms, 3 hours a week. Professor Russell.

509, 510. Photometry. Laws of radiation and illumina-

tion. Atmospheric extinction. The various kinds of photometers. Results of photometric investigation of the solar system. Work on variable stars with polarizing photometer attached to 23-inch equatorial. Discussion of observations and interpretation of light-curves. Orbits of eclipsing variables. Photographic photometry. Müller: *Die Photometrie der Gestirne;* André: *Traité d'astronomie stellaire.* Both terms, 3 hours a week. Professor Dugan.

PHYSICS

501, 502. Theory of Electricity. Reading course. Mascart et Joubert: *L'Electricité et le Magnétisme.* Both terms, 3 hours a week. Professor McClenahan.

503, 504. Absolute Measurements in Electricity and Magnetism. Reading course. Both terms, 3 hours a week. Professor McClenahan.

505, 506, *a.* (Mathematics 531, 532.) Analytical Mechanics. Including the theory of small oscillations and the theory of the potential. Both terms, 3 hours a week. Professor Adams.

505, 506, *b.* (Mathematics 531, 532.) Hydrodynamics and Elasticity. Both terms, 3 hours a week. Professor Adams.

The courses 505, 506, *a,* and 505, 506 *b,* are not given in the same year. The one to be given will be determined by the professor in charge.

508. Heat. Historical sketch of the development of the science of heat. The analytical theory of heat. Differential equations of the flow of heat. Fourier's theorem. Solutions of special cases of interest because of their application to cosmical problems or because of their use in determining conductivities. Kinetic theory of gases. Second term, 3 hours a week. Professor W. F. Magie.

509, 510. Electron Theory of Matter. The development of the electron theory, based on Maxwell's equations, together with Lorentz's work and the principle of relativity. The application of the conception of the electron to the material furnished by the different branches of physics and especially by the science of optics, the conduction of electricity through gases, radioactivity, spectroscopy, and chemistry. Both terms, 3 hours a week. This course extends over two years. Professor Richardson.

511. Theory of Elastic Solids. The physical properties of actual solids. The ellipsoids of strain and stress and their respective properties. Potential energy of strained solids. Problem of Saint Vénant. Special problems of flexure and tension. Distentional and compressional waves in solids of two dimensions. Double refraction and the Fresnel wave front. First term, 3 hours a week. Professor Loomis.

512. Theory and Practice of Exact Measurements. This course is intended for students who have already had training in general laboratory practice. It is designed to instruct them in more refined methods of observation, and especially to train them in the use of those instruments which are frequently employed in research. Second term, 3 hours a week. Professor Loomis.

513. Electromagnetic Theory of Light. Reflection, refraction, dispersion, absorption. Rotatory polarization. Optical properties of metals. First term, 3 hours a week. Professor Trowbridge.

514. Spectroscopy. A discussion of the experimental investigations of emission, absorption, fluorescence, and phosphorescence. Second term, 3 hours a week. Professor Robinson.

516. Atmospheric Electricity. Introduction to theory of ionized gases. Methods of observation. Atmospheric ionization, its causes and distribution. Atmospheric potential gradient. General electrical phenomena. Detailed discussion of work of various observers. Second term, 3 hours a week. Professor Cooke.

518, *a*. The Mathematical Theory of Electric Waves and Oscillations. Second term, 3 hours a week. Professor Adams.

518, *b*. Statistical Mechanics and Kinetic Theory of Gases. A discussion of the methods of statistical mechanics, with applications to the kinetic theory of gases and the theory of radiation. Second term, 3 hours a week. Professor Adams.

The courses 518 *a* and 518 *b* are not given in the same year. The one to be given will be determined by the professor in charge.

519, 520. Heat and Temperature. Principles of heat flow. Practical methods of measuring heat quantities and temperature through extended ranges, chiefly by electrical methods. Calorimetry and pyrometry. This is a lecture and experimental course and is intended to give students a working knowledge of modern methods employed for measuring thermal conductivities, specific heats, latent heats, and low and high temperatures. The methods of electrical and optical pyrometry are considered. Both terms, one lecture and 4 hours supervised laboratory work a week. Professor Northrup.

The physical laboratory is open throughout the week to graduate students.

For undergraduate courses in Physics also listed as graduate courses, see page 278.

CHEMISTRY

501, 502. Advanced Quantitative Analysis and Research in Inorganic Chemistry. Both terms, at least 9 hours of laboratory work a week. Professor McCay.

504. The Phase Rule and Metallography. Second term, 3 hours a week. Professor D. P. Smith.

505, 506. Organic Chemistry. Lectures upon Stereochemistry, tautomerism, and special topics, accompanied by the reading and discussion of the literature. Both terms, 3 hours a week. Prerequisite course: Elements of Organic Chemistry. Professor Neher.

507, 508. Advanced Laboratory Work in Organic Chemistry. Preparations, special methods of analysis and research. Both terms, 3 hours a week. This course will consist of at least 9 hours of laboratory work a week. Professor Neher.

509. Electrochemistry. Lectures on the historical development of the subject accompanied by laboratory work on Faraday's Law, conductivity, transference numbers and related subjects. Two lectures and laboratory work involving at least 3 hours. First term, 3 hours a week. Professor Hudson.

513, 514. Physical Chemistry. Lectures, reading and laboratory experiments devoted largely to chemical equilibrium and the energy side of chemical reactions. Two lectures and laboratory work involving at least 3 hours. Both terms, 3 hours a week. Professor Hudson.

515. High Temperature Measurements. Lectures and reading on the production and measurements of high and low temperatures with the recent developments in the theory and practice of electrical and optical pyrometry accompanied by laboratory work. Two lectures and laboratory work involving at least 3 hours. First term, 3 hours a week. Professor Hulett. [Not given 1912-1913.]

516. Gas Analysis. One lecture a week devoted to the methods involved in the determination of the properties of gases, and upon representative types of apparatus with the methods involved in their application to the analysis of various gases. At least 6 hours of laboratory work weekly are devoted to an experimental study of the gases. This work deals with the determination of the density of gases and with the analysis of illuminating and other gases. Second term, 3 hours a week. Professor Foster.

511, 512. Research in Physical Chemistry. The research to take any of the following directions: Equilibrium studies, determination of physico-chemical constants, chemical dynamics, colloids and suspensions. Both terms, hours to be arranged. Professor Hudson.

517, 518. Research in Electrochemistry. Standard cells, the coulometer, concentration cells, amalgams, the nature of electrodeposits and decomposition potentials. Both terms, hours to be arranged. Professor Hudson.

SEMINARY IN PHYSICAL CHEMISTRY. Reading and discussions of selected authors and topics. Both terms, hours to be arranged. Professor Hudson.

For undergraduate courses in Chemistry also listed as graduate courses, see page 278.

GEOLOGY

All the graduate courses offered by this department are adjustable to the needs of individuals or small groups of students, and the subject matter and method of presentation may be modified to meet various conditions.

A candidate for a degree may devote a considerable portion of his time to one of the courses, supplementing the

regular work by the investigation of some special problem which will afford the material for his thesis.

501, 502. Chemical Geology. Composition of the earth and the chemistry of geological processes. Relative abundance, distribution and association of the chemical elements; genesis and alterations of minerals; metamorphism; weathering and chemical denudation; lake and river waters; underground waters and gases, magmatic and meteoric; evolution of the ocean and the atmosphere; the geological effects of radio-activity. Both terms, 3 hours a week. Professor Smyth.

503, 504. Stratigraphy and Invertebrate Palaeontology Lecture, field, and laboratory work, leading to the study and description of the stratigraphy and tectonics of some particular district, or of the stratigraphy and palaeontology of some sedimentary formation. Both terms, continuing through one or more years, 3 or more hours a week. Professor van Ingen.

505, 506. Petrology. A general study of the igneous, sedimentary, and metamorphic rocks, followed by the detailed investigation of some problem in regard to their origin and relations. Laboratory, library, and field work continuing through one or more years, 3 or more hours a week. Professor Smyth.

507, 508. Mineralogy. The paragenesis and chemical relations of minerals, and the study of crystallographic types, with measurement and projection of crystal forms and the determination of their physical constants. Both terms, 3 or more hours a week. Professor Phillips.

509, 510. Geological History of Man. Lectures, reading, and discussion of original memoirs bearing upon the origin and geological history of man. Both terms, 3 or more hours a week. Dr. Sinclair.

511, 512. (Biology 511, 512.) Vertebrate Palaeontology. Lectures and laboratory work on the morphology and evolution of fossil vertebrates. Both terms, 3 or more hours a week. Professors Scott and Farr.

513, 514. Economic Geology. The metalliferous and non-metalliferous mineral deposits of economic importance. Their character, distribution, origin and relations, and the problems which they present. Laboratory, library and field work continuing through one or more years, 3 or more hours a week. Professor Smyth.

For undergraduate courses in Geology also listed as graduate courses, see page 278.

BIOLOGY

501. Cytology. Lectures, laboratory and research work on protoplasm; the structures and functions of cells; nuclear and cell division; origin and maturation of the germ cells. First term, 3 hours a week. Professor Conklin. [1913-1914.]

502. Ontogenesis. Lectures, laboratory and research work on the fertilization, cleavage and promorphology of the egg; phenomena of differentiation; problems of experimental embryology; the cellular basis of heredity and evolution. Second term, 3 hours a week. Professor Conklin. [1913-1914.]

503. Comparative Histology and Histogenesis. Studies of supporting, nutritive, excretory, respiratory and several other groups of tissues, including their origin and development; repair, regeneration and metamorphosis. Lectures, laboratory and research work. First term, 3 hours a week. Professor Dahlgren.

504. Histology of the Kinetic and Nerve Tissues. Comparative studies of the organs and tissues which produce light, heat, motion and electricity; the tissues of

nervous sensation, communication and stimulation; the organization of nerve tissues in several animal forms. Lectures, laboratory and research work. Second term, 3 hours a week. Professor Dahlgren.

505. Morphology of the Organ Systems of Vertebrates. Conferences, laboratory, and research work on the comparative anatomy and development of the organ systems of vertebrates. About 3,000 anatomical preparations are at present available for reference and study in connection with this course. First term, 3 hours a week. Professor McClure.

506. Special Problems of Vertebrate Anatomy. Conferences, laboratory, and research work. This course is designed to place the student in a position to comprehend the main problems of vertebrate morphology and completes the study of the comparative anatomy and development of the organ systems of the anamnia and amniota. Second term, 3 hours a week. Professor McClure.

507. The Development of Plant Life. Studies in the structure, life-history and taxonomy of various groups of plants. First term, 3 hours a week. Professor Rankin.

508. Systematic Botany of the Vascular Plants. Structure as related to description and classification. Exercises in plant analysis, description and classification. The characters of the larger families of Angiosperms. Second term, 3 hours a week. Professor Rankin.

510. Theories of Evolution. A history of the doctrine of evolution, with discussion of the theories which have been proposed to explain the modes and factors of development. Second term, 3 hours a week. Professor Scott.

511, 512. (Geology 511, 512.) Vertebrate Palæontology.

Lectures and laboratory work on the morphology and evolution of fossil vertebrates. Both terms, 3 or more hours a week. Professors Scott and Farr.

513, 514. Physical Chemistry of the Cell. An application of the principles of physical chemistry to physiological problems. The role of diffusion, osmotic pressure, electrolytic dissociation, reaction velocity, catalytic action and surface tension in organisms, the properties of colloids, the effect of salts on cells and the permeability of cells and tissues will be studied in considerable detail. Based on Cohen's *Physical Chemistry for Physicians and Biologists,* trans. by Fisher, and Hoeber's *Physikalische Chemie der Zelle und Gewebe.* Both terms, 3 hours a week. Dr. Harvey.

515, 516. Morphology and Physiology of the Central Nervous System. A series of conferences with graduate students, together with assignments of problems and direction of research work in the field of Neurobiology. Both terms, number of hours indefinite. Dr. Paton.

517, 518. Normal and Experimental Embryology. Both terms, 3 hours a week. Professor Conklin. [1912-1913.]

For undergraduate courses in Biology also listed as graduate courses, see page 279.

PHYSICAL GEOGRAPHY

502. Physical Geography. The relations of geography and history are shown by a series of lectures and conferences upon the effect of environment upon the development of mankind, physically, socially and commercially. Second term, 3 hours a week. Professor Libbey.

UNDERGRADUATE COURSES ALSO LISTED AS GRADUATE COURSES*

PHILOSOPHY.

402. Introduction to the Philosophy of Religion. Senior course, second term, 3 hours a week. Professor Ormond.

403*b*. Fundamental Problems of Philosophy. Senior course, first term, 3 hours a week. Professor Kemp Smith.

405. Types of Ethical Theory. Senior course, first term, 3 hours a week. Professor G. S. Patton.

406. Fundamental Ethical Concepts. Senior course, second term, 3 hours a week. Ex-President Patton and Professor G. S. Patton.

407. History of Greek Philosophy. Senior course, first term, 3 hours a week. Professor Bowman.

410. The Origins and Tendencies of Nineteenth Century Thought. Senior course, second term, 3 hours a week. Professor Kemp Smith.

ART AND ARCHÆOLOGY.

401. Greek Sculpture. Senior course, first term, 3 hours a week. Professors Marquand and Elderkin.

402. Italian Sculpture. Senior course, second term, 3 hours a week. Professors Marquand and Morey.

405. The Revival of Painting in Italy. Senior course, first term, 3 hours a week. Professors Mather and Morey.

406. Northern Painting. Senior course, second term, 3 hours a week. Professor Mather.

407, 408. Elements of Architecture. Senior course, both terms, 3 hours a week. Mr. Ward and Professor Morey.

* These courses are described in detail in the regular statements of undergraduate courses on pp. 132-195.

CLASSICS

407. (Philosophy 407.) History of Greek Philosophy. Senior course, first term, 3 hours a week. Professor Bowman.

419. (Hist., Pol. and Econ. 419.) Roman Law. Senior course, first term, 3 hours a week. Professor Westcott.

SANSKRIT

401, 402. Sanskrit. Senior course, both terms, 3 hours a week. Professor Robbins.

ENGLISH

401. Restoration and Eighteenth Century Literature. Senior course, first term, 3 hours a week. Professor Axson.

403. English Poetry of the Nineteenth Century. Senior course, first term, 3 hours a week. Professor Henry van Dyke.

404. English Prose of the Nineteenth Century. Senior course, second term, 3 hours a week. Professor Axson.

405. Advanced Old English. Senior course, first term, 3 hours a week. Professor Hunt.

MATHEMATICS

407, 408, *a*. Honors Course in Pure Mathematics. Projective Geometry or Algebra. Senior course, both terms, 3 hours a week. Professor Veblen.

409, 410, *b*. Honors Course in Analysis. Senior course, both terms, 3 hours a week. Professor Swift.

411, 412, *c*. (Physics 411, 412, *c*.) Honors Course in Applied Mathematics: Electricity and Magnetism. Senior course, both terms, 3 hours a week. Professor Adams.

PHYSICS

411, 412, *c*. (Mathematics 411, 412, *c*.) Electricity and Magnetism. Senior course, both terms, 3 hours a week. Professor Adams.

413, 414, *d*. Theoretical Physics. (*a*) Thermodynamics; (*b*) Electrical Properties of Gases. Senior course, both terms, 3 hours a week. Professors W. F. Magie and Richardson.

415, 416, *e*. Experimental Physics: Electricity and Magnetism. Senior course, both terms, 3 hours a week. Professor Cooke.

CHEMISTRY

401. Quantitative Analysis. Senior course, first term, 3 hours a week. Professor McCay.

402. Quantitative Analysis. Senior course, second term, 3 hours a week. Professor McCay.

403. Organic Chemistry. Senior course, first term, 3 hours a week. Professor Neher.

404. Physical Chemistry. Senior course, second term, 3 hours a week. Professor Hudson.

405. Organic Preparations. Senior course, first term, 3 hours a week. Professor Neher.

406. Laboratory work in Physical Chemistry. Senior course, second term, 3 hours a week. Professor Hudson.

GEOLOGY

401, 402. Historical Geology. Senior course, both terms, 3 hours a week. Professors Scott and van Ingen.

403. Structural and Dynamic Geology. Senior course, first term, 3 hours a week. Professor Smyth.

404. Economic Geology. Senior course, second term, 3 hours a week. Professor Smyth.

405, 406. Invertebrate Palaeontology. Senior course, both terms, 3 hours a week. Professor van Ingen.

407. Mineralogy. Senior course, first term, 3 hours a week. Professor Phillips.

408. Petrology. Senior course, second term, 3 hours a week. Professor Smyth.

BIOLOGY

401. Comparative Anatomy of Vertebrates. Senior course, first term, 3 hours a week. Professor McClure and Mr. Silvester.

402. Vertebrate Embryology. Senior course, second term, 3 hours a week. Professor McClure and Mr. Silvester.

403. Histology. Senior course, first term, 3 hours a week. Professor Dahlgren.

404. Advanced Histology, and Neurology. Senior course, second term, 3 hours a week. Professor Dahlgren.

406. Vertebrate Palaeontology. Senior course, second term, 3 hours a week. Professors Scott and Farr.

407, 408. General Physiology. Senior course, both terms, 3 hours a week. Dr. Harvey.

ASTRONOMY

401, 402. Celestial Mechanics. Senior course, both terms, 3 hours a week. Professor Russell.

DIRECTORS OF THE SEMINARIES

1912-1913

Philosophical Seminary
Professor Kemp Smith.

Seminary in Politics
Professor Ford.

Economic Seminary
Professor Meeker.

Classical Seminary
Professor Capps.

English Seminary
Professor Harper.

Romance Seminary
Professor Buffum.

Germanic Seminary
Professor Blau.

Mathematical Seminary
Professor Eisenhart.

THE UNIVERSITY LIBRARY

ERNEST CUSHING RICHARDSON, PH.D., *Librarian.*
HARRY CLEMONS, A.M., *Reference Librarian.*
GEORGE DOBBIN BROWN, PH.D., *Assistant Reference Librarian.*

MISS CHARLOTTE MARTINS, *Superintendent of Purchase.*
MISS LETITIA NASSAU GOSMAN, *Superintendent of Catalogue.*
WALTER RUE COTTRELL, *Superintendent of Circulation.*
DAVID WALTER DUFFIELD, *Superintendent of Printing and Binding.*

MISS JANE WRIGHT, *Art Reference Librarian.*
MISS REBECCA SARAH CAWLEY, *Department Librarian, Guyot Hall.*

The Library began with the College, Governor Belcher, the patron of the College, directing his especial attention and interest to it, and leaving to it his collection of 474 volumes. When the first catalogue was printed in 1760, the Library consisted of about 1,300 volumes. It was increased largely in the sixties, but was decimated during the Revolution and in 1796 numbered only 2,300 volumes. It was partly destroyed by fire in 1802, but shortly after its size was fully restored by gifts. In 1816 it numbered 7,000 volumes, in 1839, 8,000, and in 1850 it had advanced to 9,313 volumes. In 1868 it contained but 14,000 volumes, without separate building or librarian.

THE CHANCELLOR GREEN LIBRARY

In 1868 the Elizabeth Fund for the purchase of books was created by John C. Green, Esq., and soon afterward he erected a library building (in 1872-3) named in honor of Chancellor Green. This Chancellor Green Library building, fitted throughout with the most modern system of heating, ventilation, and electric lighting, is the working library of the University for undergraduates, containing the standard and latest works in all departments and especially fitted for

study. In addition the Chancellor Green Library contains the following special collections:

The Charles Ewing Green Alcove. The alcove facing the public entrance to the Chancellor Green Library has been set aside as a memorial to the late Charles Ewing Green, LL.D., Class of 1860, for many years a Trustee of the University, and, as the administrator of the John C. Green estate, one of Princeton's most generous and consistent benefactors. To commemorate the active interest which he always took in the Chancellor Green Library as well as in the general library development of the University, the late Mrs. Charles E. Green has erected in this alcove a memorial tablet, and has placed upon the shelves books on classical philology. There are at present 2,985 volumes in this collection.

The Class of 1878 Library of Chemistry, established and endowed in 1889, numbering at present some 171 volumes, distributed among the collections relating to this subject. Location: alcove Z, gallery.

The Class of 1883 Library of Political Science and Jurisprudence, founded and endowed in 1893, contains at present 1,003 volumes. Location: alcove X, gallery.

The Class of 1889 Library of American History, established and endowed in 1899, contains at present 787 volumes. Location: alcove C, main floor.

The Pyne Library Building

The Chancellor Green building having long been crowded beyond its calculated capacity, provision was made on the occasion of the Sesquicentennial by the late Mrs. Percy Rivington Pyne for a new building with a capacity of 1,200,000 volumes, besides adequate administration rooms, twenty rooms for instruction and research, and a large room for the exhibition of rare books. This building, of Long-

meadow stone, in the Oxford Gothic style, forms a hollow quadrangle of about 160 feet square, connected with the Chancellor Green Library by a delivery room of 50 by 20 feet. It is fitted with modern improvements in heating, ventilation, stacks, electric elevators, interior telephone, etc., and has shelves at present sufficient for about 500,000 volumes. On the exterior of the western tower gateway are statues of President Witherspoon and President McCosh, James Madison, class of 1771, fourth President of the United States, and Oliver Ellsworth, class of 1766, second Chief Justice of the United States Supreme Court.

The Central Collection

The general collection which occupies the united buildings consists of 294,915 volumes and 65,683 unbound periodicals and pamphlets. It includes, in addition to those already mentioned, the following special collections:

Special Collections

The Autograph-Manuscript Collection, relating chiefly to the history of the University. This includes the Pyne-Henry collection, the Abbott papers, the Hunt papers, the Miller papers, and miscellaneous, 2,289 documents. Location: exhibition room.

The Morgan Collection of Virgils, presented by Junius S. Morgan, Esq., '88. 672 volumes. Location: exhibition room.

The Pierson Civil War Collection, presented by John S. Pierson, Esq., '40. 6,622 volumes; 2,520 unbound pamphlets; including also several thousand clippings. Location: stack, fourth floor.

The Paton Spanish War Collection of newspapers and magazines, presented by William Agnew Paton, Esq. 70 volumes. Location: stack, fourth floor.

The Princeton University Collection, including the large collection of Princetoniana presented by Professor William Libbey, '77. 5,602 volumes. Location: stack, fourth floor.

The Class of 1875 Library of English Poetry and Drama. 1,891 volumes, distributed among the collections relating to these subjects.

The Music Library, founded by Rudolph E. Schirmer, '80, John W. Garrett, '95, and Lewis F. Pease, '95. 3,868 volumes, located in alcove R, Chancellor Green Library, and stack, second floor.

The Garrett Collection of Oriental Manuscripts, consisting of about 2,400 manuscripts, chiefly in Arabic, but including 75 manuscripts in twenty-five other languages, *e.g.,* Latin, Greek, English, Persian, Pali, Javanese, Chinese, Japanese, etc., deposited in the University Library. This collection is most exhaustive and includes books on law, medicine, mathematics, natural sciences, poetry, history, biography, geography, travels, rhetoric, grammar, and lexicography, as well as works on the Mohammedan religion and the exegesis of the Koran. Location: northwest corner, second floor.

The Willard Hall Porter Law Library, presented by Mrs. Willard Hall Porter and her son, W. H. Porter, Jr., 1903. 1,800 volumes. Location: stack, fourth floor.

The Samuel Miller Collection, presented by Samuel Miller Breckinridge Long, 1903, in memory of Judge Samuel Miller Breckinridge, '50. 1,200 volumes distributed through related subjects.

The Patterson Collection, consisting of 872 Horaces and other rare and choice books, presented by Robert W. Patterson, Esq., '76. Location: exhibition room.

The Bergen Collection, consisting of 179 rare and choice books, chiefly modern, presented by the Rev. G. S. Bergen in memory of his son, Ernest G. Bergen, '95. Location: stack, fourth floor.

The Ivy L. Lee Collection, consisting of about 85 books on Russia, presented by Ivy L. Lee, '98. Location: stack, first floor.

The Whig Hall Collection, consisting of about 4,000 volumes, presented by Whig Hall, distributed through related subjects.

The Clio Hall Collection, consisting of 1,542 volumes, presented by Clio Hall. Location: stack, fifth floor.

Special collections, other than of books or manuscripts, are:

The Garrett Collection of Coins, deposited in the University Library. This collection, embracing also specimens from many foreign countries, contains an unusually fine series of American coins. In addition to the coins that have been used for money the collection includes many medals commemorative of notable historic events and persons.

The Hutton Collection of Death Masks, presented by the late Laurence Hutton, A.M. 80 masks Location: exhibition room.

Seminary and Other Special Libraries

Certain rooms in the Pyne Library Building are available for the use of seminaries, organized under the rules of the Faculty for "the development among our higher students of independent scholarly ability by extensive advanced study and training in the methods of original research." Several rooms have been assigned and provided with special libraries, partly by loan from the main collection, but chiefly by special endowment and purchase. The following have been established:

The Philosophical Seminary. Founded by Mrs. C. B. Alexander (ethics), and by the Class of 1882 (logic and metaphysics). 1,863 volumes; 1,514 theses. Location: southeast corner, first floor.

The Economic Seminary. Founded by the Class of 1888. 2,839 volumes. Location: southeast corner, first floor.

The Political Seminary. Founded by various alumni and friends. 818 volumes. Location: southeast corner, second floor.

The Classical Seminary. Founded by a friend of the University. 7,589 volumes; 21,698 theses. The Classical Seminary at present occupies five rooms in the southwest corner of the building.

The English Seminary. Founded and supported by Charles Scribner, Esq., '75. 2,445 volumes; 1,108 theses. Location: northwest corner, first floor.

The Romance Seminary. Founded by the Class of 1890. 2,519 volumes; 343 theses. Location: northwest corner, first floor.

The Mathematical Seminary. Founded by the Hon. John L. Cadwalader, '56; Professor M. Allen Starr, M.D., LL.D., '76; David B. Jones, Esq., '76; Thomas D. Jones, Esq., '76; Chandler W. Riker, Esq., '76; and the Hon. Adrian Riker, '79. 2,801 volumes; 1,792 theses. Location: northwest corner, second floor.

The Historical Seminary. Founded by Mr. and Mrs. M. Taylor Pyne in memory of Robert Stockton Pyne. 3,304 volumes. Location: southeast corner, second floor.

The Germanic Seminary. Founded by the Class of 1891, and including the library of the late Professor Willard Humphreys. 2,231 volumes; 130 theses. Location: southeast corner, first floor.

The Semitic Seminary. 726 volumes. Location: stack, second floor.

Department Libraries

These are libraries selected from the general collection

and kept in proximity to the corresponding laboratories. The following are organized:

Art; The Marquand Collection, presented by Professor Allan Marquand, '74, consisting of 5,277 volumes on the history of art. In the Art Museum.

Astronomy; containing at present 1,470 volumes and 565 theses. In the Working Observatory.

Biology; supported by Charles W. McAlpin, '88. 4,965 volumes; 110 theses. In Guyot Hall.

Botany; containing 582 volumes. In Guyot Hall.

Geology and Palæontology; 3,630 volumes. In Guyot Hall.

Engineering, including the Class of 1878 Library of Engineering; 1,043 volumes. In the School of Science Building, second floor.

Physics; The Brackett Library, presented by Stephen S. Palmer, David B. Jones '76 and Thomas D. Jones '76; containing 2,096 volumes. Location: Palmer Physical Laboratory.

Use of the Library

The Library is open from 8 A. M. until 10 P. M. during term time, and from 9 A. M. until 1 P. M. in vacation.

Books may be drawn by all officers and students of the University and Theological Seminary, and by any person properly introduced. The number of books which may be taken is limited to three in the case of undergraduates, with the exception of Seniors, who may take five. Officers, Fellows, and graduate students may take any reasonable number. Books may be kept by undergraduates for two weeks, by Fellows and graduate students for four weeks, and by officers for any reasonable time. All books may be renewed when due, unless wanted by some one else.

Fines are charged at the rate of two cents a day on

all books kept overtime. If an overdue book is wanted at the Library for any reason, it may be sent for and a charge of ten cents for messenger made. Postal cards are sent as a reminder of books overdue only when the books are wanted by others. No books may be drawn while there are unpaid fines.

The Hall Libraries

The American Whig and Cliosophic Societies have turned over a large part of their books to the University Library, but each has in its own building a convenient working library. The library of the Philadelphian Society contains about 1,300 volumes.

The Theological Seminary Library

Students of the University are allowed to use the library of the Princeton Theological Seminary, which contains 92,240 volumes, distributed in two buildings. The one, the general library, is open for consultation and loan of books from 9 A. M. to 1 P. M. and from 2 to 4 P. M. on week-days, except Saturday, when the hours are from 9 A. M. to 1 P. M. The other, the reference library, is open every week-day from 9 A. M. to 1 P. M., from 2 to 5 P. M., and from 7 to 10 P. M.

Summary of Libraries

University Library	294,915
Hall Libraries	12,800
Theological Seminary Library	92,240
Total (exclusive of pamphlets and duplicates),	399,955

PART VI

EXAMINATIONS, STANDING, AND GRADUATION; HONORS; GENERAL ORDERS; AND PUBLIC LECTURES

EXAMINATIONS, STANDING, AND GRADUATION

MODE OF CONDUCTING EXAMINATIONS

All written examinations and written recitations are conducted under the honor system. A student is not watched during an examination by any officer of the University, but he is required to write on his paper a pledge that he has not been guilty of any dishonesty or irregularity in connection with the examination.

The administration of the honor system is in the hands of a student committee by whose rules it is the recognized duty of every student to report to the committee any evidence of dishonesty in examination that may come under his observation. If after investigation of such evidence the committee finds a student guilty of dishonesty, it reports his case to the Faculty with a recommendation that he be finally dismissed from the University.

REGULATIONS RESPECTING CONDITIONS AND ABSENCE FROM EXAMINATION

I

Conditions are incurred:

1. By failure to satisfy the requirements of any course. The requirements of a course include both the term work and the examination.

2. By exclusion from an examination on the recommendation of a preceptor. On the recommendation of a preceptor a Department may exclude a student from the

examination in any course in which his work with the preceptor has been unsatisfactory.

3. By exclusion from an examination on the recommendation of a laboratory instructor. On the recommendation of a laboratory instructor a Department may exclude a student from the examination in any course in which his work with the laboratory instructor has been unsatisfactory.

4. By absence from an examination. Absence from an examination, due to whatever cause, is counted as a condition if the term grade in the subject is below the passing mark. When a student's term grade in a subject is above the passing mark, the examination may be postponed on account of illness (*a*) at the time of the examination, (*b*) immediately preceding it, (*c*) during a considerable portion of the term; such a postponement must be authorized by the Committee on Examinations and Standing before the time of the examination, unless the student is ill at the time of the examination. In all cases of absence from an examination, the deficiency must be made up as if it were a condition.

II

1. A student who, at the end of a term, has conditions amounting to half a term's work, or more, is dropped from his class. In applying this rule, (1) not only conditions of that term are counted, but also conditions of a year's standing or more, and all entrance conditions, provided the student has been in Princeton more than a year; (2) unavoidable absence from an examination shall be counted as a condition one year after the date of the omitted examination, unless meanwhile the deficiency has been made good.

2. A student of the Department of Civil Engineering thus deficient, or a Freshman who at the end of his first

term fails in half of his work, or more, may, after the lapse of a whole term during which he must be absent from Princeton, and with the permission of the Faculty, enter the next lower class; but a student dropped from his class at the end of an academic year may, with the permission of the Faculty, be allowed to enter the next lower class at the beginning of the next academic year.

3. Any other student, except a Senior, thus deficient may, after the lapse of a whole term during which he must be absent from Princeton, and with the permission of the Faculty, either enter the next lower class, or re-enter college with an arrangement of studies which will make it possible for him to meet the requirements for his degree by the February following the graduation of his class; or, if the quality of his work warrants it, he may be permitted to take extra courses and graduate with his former class; but a student dropped from his class at the end of an academic year may, with the permission of the Faculty, be allowed to enter the next lower class at the beginning of the next academic year.

4. A student thus deficient at the end of the first term of Senior year may, with the permission of the Faculty, continue with his class during the second term, but an opportunity is not given him until the next academic year to remove his conditions in first term courses, and thus to qualify for his degree.

5. A student of the Department of Civil Engineering who, after the condition examinations in September, has standing against him a condition in any mathematical or technical course shall be dropped from his class. [In cases where this rule applies, it will replace rules 8 and 9 of section III.]

6. A Senior who receives conditions during his final examinations has an opportunity to remove these condi-

tions before Commencement unless his total deficiency amounts to half of a term's work or more. (But see Sec. III, §§ 1, 8 and 9.) In applying this rule all conditions, of whatever term, and also all entrance conditions, are counted. If he then removes all his conditions, he may be recommended to receive a degree with his class. No further opportunity is given him until the next academic year to remove his conditions and thus to qualify for a degree.

III

Examinations for the removal of conditions occur as follows:

1. For the removal of entrance conditions by examination opportunities are given in December during the last week before Christmas vacation, and also at the regular entrance examinations in June and September. No examination for the removal of an entrance condition is given to a Senior after the regular examination period in December.

2. If a Freshman having an entrance condition in a subject maintains a standing of third group, or better, for the year, in all the courses which he takes in the department concerned, the condition will be cancelled, provided that he have a certificate from his school stating that he has met the requirements of the subject in his school.

3. A student having an entrance condition still standing at the beginning of Sophomore year, or later, will be required to take, for the purpose of cancelling the condition, an additional course or courses in the department concerned, under the direction of the Committee on Examinations and Standing. A course so taken becomes part of the student's schedule and a condition in it will be treated the same as a condition in any other course.

4. Examinations for the removal of conditions incurred by Seniors at the end of the first term of Senior

year are given during the days immediately preceding the Easter recess. These examinations may be taken only by Seniors. (But see Sec. II, § 4.)

5. For the removal of all conditions examinations are held during the two weeks beginning on the second Monday preceding the opening of the University in September.

6. There are no other opportunities for the removal of a condition by examination, except at the examination period corresponding to the one when the condition was originally incurred, and then only by an arrangement made with the examiner previous to the examination period.

7. Upon application to the Faculty a student may be allowed to remove a condition in an elective course by taking and satisfying the requirements of an extra elective course of at least as many hours. But only one such extra course may be taken in any term, and this course must be applied for before the opening of the term in which it will be taken.

8. A student who is excluded from an examination by a department on the recommendation of a preceptor or of a laboratory instructor (see Sec. I, § § 2 and 3), is not allowed an examination for the removal of the condition incurred, but must either repeat the course or substitute an extra course for it, as the Committee on Examinations and Standing shall direct. A Senior who, in the second term, falls under this rule may remove the condition by examination, but not until the next academic year.

9. Whenever the Committee on Examinations and Standing, acting on its own motion or on the recommendation of any department of the University, finds that a student has neglected the work of a course in which he has incurred a condition, such condition cannot be removed by examination, but only by repeating the course or by substituting an extra course for it, as the Committee on Examina-

tions and Standing shall direct. A Senior who, in the second term, falls under this rule may remove the condition by examination, but not until the next academic year.

IV

A fee of $3 shall be charged for each examination taken for the removal of a condition; also for the examination in a course which has been repeated (see Sec. III, § § 8, 9), or which has been taken for the removal of a condition (see Sec. III, § 7).

STANDING

The results of the term examinations are combined with those of the work done during the term to decide the relative standing or rank of the student.

The rank in each course is determined by the instructor, who computes from the term work and examinations the marks of the class; those who have satisfied the requirements of the course are classified in five groups in the order of merit.

The first group indicates very high standing and contains not more than ten per cent. of the entire class.

The second group indicates high standing and contains not more than twenty per cent. of the entire class.

The third group indicates medium standing and contains not more than thirty-five per cent. of the entire class.

The fourth group indicates low standing and contains not more than twenty-five per cent. of the entire class.

The fifth group contains the remainder; it indicates very low standing.

The general rank of a student is determined by combining his group numbers in the several courses in proportion to the allotted schedule time of each. The students whose averages are highest, and above an established limit, are assigned to the first general group; those next highest

to the second general group, and so on through the general groups.

A report of the standing of each student is made to his parent or guardian by the Registrar at the close of the first term and at the close of the year. The latter report gives also the standing for the whole year.

DEGREES

A student who passes his final examinations is ordinarily recommended by the Faculty for the degree appropriate to his course, and if the recommendation is approved by the Trustees, the degree is conferred at Commencement and the diploma of the University is given.

FINAL RANK AND GRADUATION HONORS

The final rank of members of the graduating class is computed by combining the averages for the several years of the course, except that the average for the Freshman year is omitted in those cases in which it would lower the standing of the student. The Faculty then determines what portion of the class shall be printed as the Honor List —the names of the members of each group being printed in alphabetical order. Special Honors in particular Departments are also awarded.

The first and second general groups thus determined are the Honor Groups of the graduating class, and are designated *magna cum laude* and *cum laude,* respectively.

The higher distinction of *insigni cum laude* and the highest of *summa cum laude* are reserved for very unusual excellence.

COMMENCEMENT SPEAKERS

The student whose individual rank is highest is ordinarily awarded the Latin Salutatory by vote of the Faculty. The Valedictory is awarded with special regard to the quali-

fications of the student as a valedictorian as well as on the ground of scholarship.

In the award of all degrees and honors, regard is had to the conduct of the student during his course, and any student who has incurred serious discipline may be debarred from the rank to which otherwise his scholarship would have entitled him.

HONORS

REGULATIONS FOR GENERAL AND SPECIAL HONORS

Honors are of two kinds, *General* and *Special.*

I. *General Honors* are awarded for general excellence in studies at the close of each academic year, according to the following provisions: At the close of the Freshman, Sophomore, and Junior years, High General Honors are given to those whose average rank for the year is within the first general group, and General Honors to those whose average rank for the year is within the second general group. At graduation High General Honors are given to those whose final average rank for the whole academic course is within the first general group, and similarly General Honors to those within the second general group. In very exceptional cases the Faculty may also bestow the further distinction of Highest Honors. No Senior who has not taken the Junior year in Princeton shall receive General Honors.

II. *Special Honors* are awarded for excellence in single leading departments of study at the close of the Freshman and Sophomore years and at graduation, according to the following provisions:

Freshmen and Sophomores who stand in the first or second group in any subject receive Special Honors in that subject.

Final Special Honors are based on the work of the Junior and Senior years, as follows: a Junior who maintains an average standing for the year not below the second group in the courses of his Department and a general standing not below the third general group, is entitled to be a candidate for Final Special Honors, and as such may sub-

stitute for one of the non-departmental elective courses in his Senior year the Pro-seminary of his Department. A Senior who elects two courses in one section of the Department of History, Politics and Economics,—that is, in History or Politics or Economics—is allowed to count membership in the Pro-Seminary of that section in place of the third required departmental course.

Final Special Honors are of three grades: Highest Honors, High Honors, and Honors.

Highest Honors shall be awarded to the Senior who in Junior and Senior years has maintained a first group standing in each of the courses of his Department and a general standing not below the second general group.

High Honors shall be awarded to the Senior who in Junior and Senior years has maintained a first group standing in at least half of the courses of his Department, with a standing not below the second group in any of these courses, and also a general standing not below the second general group.

Honors shall be awarded to the Senior who in Junior and Senior years has maintained a standing not below the second group in each of the courses of his Department and a general standing not below the third general group.

Special Honors may be awarded to a Senior who has not taken the Junior year in Princeton.

HONORS COURSE IN MATHEMATICS AND PHYSICS

Candidates for Honors in Mathematics and Physics may obtain Honors by taking and satisfactorily completing certain of the courses offered by the Departments of Mathematics and Physics, according to the following plan:

I. The Curriculum

Sophomore Year

In Sophomore year a candidate for Honors in Mathe-

matics and Physics takes one less elective course than is required in the regular course, but shall have seven hours a week in Mathematics and Physics (or Chemistry).

A Sophomore in candidacy for the degree of B.S. or Litt.B., who is also eligible for the Honors Course in Mathematics and Physics and has maintained first or second group rank in Freshman Physics, may enter the Honors Course in Mathematics and Physics, substituting for the Honors Course in Physics an Honors Course in Chemistry; namely, a course consisting of the lectures in General Inorganic Chemistry supplemented by special laboratory and conference work. (Chemistry 201, 202). A student who avails himself of this permission shall have the same privileges as other Sophomores taking the Honors Course in Mathematics and Physics.

Junior Year

A. Geometry
B. Analysis
C. Applied Mathematics (Mechanics)
D. Theoretical Physics
E. Experimental Physics

Each course is a three hour course. A Junior is to select three courses from the above table. Unless permitted a different choice by the Department, he must select C as one of these courses. In addition he selects an elective (3 hours) in some other Department than the Departments of Mathematics and Physics.

Senior Year

a. Geometry or Algebra
b. Analysis
c. Applied Mathematics (Electricity and Magnetism)
d. Theoretical Physics
e. Experimental Physics
f. Celestial Mechanics

Courses A, B, C, D, E of Junior year as prerequisite to the courses a, b, c, d, e of Senior year respectively.

The Senior year schedule shall consist of three courses selected from the Honors courses and of an additional elective (3 hours) outside the Departments of Mathematics and Physics. The three Honors courses may be selected from those of the courses a, b, c, d, e, f, of which the prerequisites have previously been taken, or from those of the courses A, B, C, D, E which have not previously been taken.

2. Students who have been ranked in Freshman year in the First or Second Group in Mathematics may enter as candidates for Honors in Mathematics and Physics at the beginning of Sophomore year. Other candidates from the same class may be admitted on recommendation of the Department of Mathematics.

A Senior electing course b must elect course A if he has not already taken it. A Senior electing course a must elect course B if he has not already taken it.

Candidates may also enter the course at the beginning of Junior year, if they satisfy the Departments of Mathematics and Physics of their ability to maintain a satisfactory standing.

3. Those who satisfactorily complete the required courses will receive Honors, with such grades of distinction as are now given, in Mathematics and Physics. No Honors will be given in Mathematics and Physics except to those taking these courses.

4. A student who does not maintain a satisfactory standing in the Honors courses will be required to leave the course, and to choose a course of study under the general plan.

At the end of any year, a student may withdraw from the Honors Course, and choose a course of study under the general plan.

5. Attendance on the Honors courses in Mathematics

and Physics will be upon the same footing as attendance upon preceptorial conferences.

HONORS COURSE IN THE CLASSICAL HUMANITIES

General Regulations

1. Candidates for the degree of Bachelor of Arts or Bachelor of Letters, who have completed the Sophomore year with an average standing in their classical courses not lower than the third group, may enter the Honors Course in the Classical Humanities at the beginning of Junior year as candidates for Honors, or if they do not enter the Honors Course, may in the Junior and Senior years take electives from the list offered for honors.

2. Candidates for the degree of Bachelor of Arts or Bachelor of Letters, who have completed the Sophomore year with an average standing in their classical courses lower than the third group, are restricted in their choice of classical electives to the list indicated on page 148.

3. Candidates for Honors in the Classical Humanities take four courses each term throughout the Junior and Senior years, a total of sixteen courses. Four of these sixteen courses are elective, but must be chosen outside the Department of Classics. Two are free electives. The other ten courses are to be selected from the list offered for honors in accordance with the following regulations: from the Group "Literature," six courses; from the Group "History and Politics," two courses; from the Group "Philosophy," one course; from the Group "Archaeology," one course.

Members of the Honors Course are also members of the Classical Pro-seminary throughout the Junior and Senior years.

4. Students in the Honors Course in Classical Humanities shall not be credited with more than four courses and a

pro-seminary in any term. Courses in addition to these may be taken only by express consent of the Departmental Committee on the Honors Course and shall be recorded only as optional courses not counting towards a degree.

5. Students who fail to maintain a satisfactory standing in the studies of the Honors Course will be required to leave the Honors Course and to choose their studies under the general plan.

6. At the end of Junior year a student may withdraw from the Honors Course and choose his studies under the general plan.

7. Those who satisfactorily complete the Honors Course will receive honors in the Classical Humanities with such grades of distinction as are now recognized.

8. Juniors and Seniors who were qualified at the end of Sophomore year to become members of the Honors Course in the Classical Humanities, but who have become members of other departments, may choose one or more electives out of the list offered for Honors in the Classical Humanities, and, so far as permitted by the regulations of the Faculty, may substitute the same for one or more of their own departmental electives.

GENERAL ORDERS

TERMS AND VACATIONS

The year is divided into two terms of eighteen weeks each.

The first term of the present academic year (1912-1913) began on Wednesday, the 18th of September, 1912, and ends on Wednesday, the 5th of February, 1913. The second term begins on Thursday, the 6th of February, 1913, and ends on Tuesday, the 10th of June, 1913, the day of the annual Commencement.

The Thanksgiving Recess extends from November 27th, 1.30 p. m., to December 2nd, 10.30 a. m.; the Christmas vacation from December 18th, 1.30 p. m., to January 2nd, 10.30 a. m.; and the Easter Recess from March 19th, 1.30 p. m., to March 25th, 10.30 a. m. Also, there are no class exercises on Washington's Birthday. There is no summer session.

REGULATIONS CONCERNING REGISTRATION AND THE CHOICE OF ELECTIVES

Rules for Registration

At the beginning of the academic year each undergraduate student shall report in person at the Registrar's Office before 3 p. m. on the Thursday on which the University opens, and register his full name, home address, and Princeton address.

In every case of neglect or delay in registration three absences will be recorded against the student for each day that the registration is delayed. Serious cases will be punished by putting the student on probation, by suspension, or otherwise, as the Faculty may determine.

Any absence from a class exercise incurred in the three days before or after a vacation or recess shall count as equivalent to two absences incurred at any other time.

Choice of Electives

It is very desirable to obtain from each student his choice of electives as early as possible, so that the rolls of the elective classes may be made out before the opening of the term. The students are therefore requested to report to the Registrar their choice of electives for the first term of the next academic year on or before the 14th of May. Changes which the student desires to make in his choice may be made by letter to the Registrar in the summer vacation. No changes will be allowed after the 20th of September.

The choice of electives for the second term must be reported to the Registrar on or before the 14th of January. No changes will be allowed after the 28th of January.

The penalty for delay in reporting the full list of electives for the term shall be the record of one absence each day for each elective not reported until the list is complete; this delay to be reckoned from the registration at the beginning of the academic year or from the 14th of January. Serious cases shall be punished more severely as the Faculty may determine. If the student enter any elective class after exercises with that class have been held, he shall be reported by the instructor as absent from those exercises.

REGULATION OF ATTENDANCE

1. The Dean of the College has charge of all matters pertaining to attendance on chapel and class exercises. Office hours from 2 to 3 every day except Saturday, in Nassau Hall.

Attendance on Class Exercises

2. Each undergraduate student is required to attend the

scheduled exercises of his class. A student who, for any cause, incurs fifty absences in any term, or any two successive terms, must take an extra course of three hours a week in the next term. All absences above fifty will be counted toward an additional extra course. In case of unavoidable absence for a prolonged period, the application of this rule may be modified by the Faculty upon recommendation of the Dean of the College.

3. If any Senior becomes liable for an extra course through absences incurred during the second term, the awarding of his degree shall be deferred until after Commencement. Exemption from the application of this rule may be granted by the Faculty upon recommendation of the Dean of the College.

4. Flagrant cases of absence will necessitate immediate withdrawal from the University.

Attendance on Chapel Exercises

5. Every undergraduate student is required to be present twice each week at morning prayers in the chapel unless excused by the President. If a student at any time falls short of this requirement by four absences, he must during the next two weeks attend four times in addition to the four times above provided for. Failure to comply with this rule will render him liable to suspension.

6. Every undergraduate in residence at the University is required to attend at least one half of the Sunday morning chapel services each quarter. Failure to comply with this rule will render him liable to suspension.

INFIRMARY REGULATIONS

1. The Sanitary Committee shall have general control of the medical administration of the Infirmary, the care of patients and the relations of physicians or nurses to the In-

firmary, or to each other, subject to the approval of the Board of Trustees.

2. The University Physician will be in attendance at the Infirmary every day from 8.45 to 10.00 a. m., and from 5.00 to 6.00 p. m. There will be no charge to students for consulting him at the Infirmary.

3. Any physician legally registered or licensed to practise medicine in the State of New Jersey will be privileged to attend patients in the Infirmary upon the approval of the Sanitary Committee. Physicians who desire to attend patients at the Infirmary will make application to the Secretary of the Sanitary Committee. This rule does not apply to physicians or surgeons called in consultation by an attending physician.

4. Assignments of patients to individual rooms at the Infirmary will be made at the discretion of the University Physician.

5. Should the number of patients at the Infirmary at any time become so large as to require the removal elsewhere of convalescents to make room for cases of serious illness, it shall be the duty of the University Physician to determine which patients may, with safety, be removed in the emergency.

6. Only emergency cases will be operated on at the Infirmary.

7. Every patient will be required to leave the Infirmary promptly after being dismissed by his physician.

8. Patients who have been dismissed from the Infirmary and who desire to return there for dressings, will be attended by the University Physician during the regular dispensary hours, from 8.45 to 10.00 a. m., and from 5.00 to 6.00 p. m.

9. If special nurses are required, they will be procured and controlled by the Infirmarian and the expense charged to the patient.

10. Visitors to patients will be admitted between the hours of 1.30 and 5.30 p. m. Visitors are not admitted to the contagious ward.

PUBLIC WORSHIP

Prayers are offered in Marquand Chapel every week-day morning.

Divine service, under the superintendence of the President, is held in Marquand Chapel on Sunday at 11 o'clock a. m.; and a brief vesper service, attendance upon which is optional, is held in Marquand Chapel every Sunday afternoon at 5 o'clock.

COMMENCEMENT EXERCISES

The Annual Commencement takes place on the Tuesday preceding the last Tuesday but one in June.

The Baccalaureate address to the graduating class is delivered on Sunday of Commencement week.

The Class Day exercises of the graduating class and the annual meetings of the Literary Societies are held on Monday of Commencement week. The alumni trustee election, and the annual meeting and luncheon of the Alumni Association of Nassau Hall, are held on Commencement Day.

PUBLIC LECTURES

TRASK LECTURES

The income from $10,000, presented by the late Spencer Trask of the Class of 1866, is available to secure the services of eminent men to deliver public lectures before the University on subjects of special interest.

STAFFORD LITTLE LECTURESHIP ON PUBLIC AFFAIRS

Founded in 1899 with a gift of $10,000 by the late Henry Stafford Little of the Class of 1844. At the suggestion of the donor, the Hon. Grover Cleveland, ex-President of the United States, was invited to deliver before the students of the University "such lectures as he might be disposed to give from year to year," and until his death in 1908 Mr. Cleveland was the Stafford Little Lecturer. From 1908 to 1910 this Lectureship was held by the Hon. George Brinton McClellan, LL.D., of the Class of 1886, and last year the Stafford Little Lectures were delivered by the Hon. Joseph H. Choate, LL.D., D.C.L. The Stafford Little Lecturer for the current year is the Hon. Elihu Root, LL.D.

THE LOUIS CLARK VANUXEM FOUNDATION OF PRINCETON UNIVERSITY

A bequest of $25,000 under the will of Louis Clark Vanuxem of the Class of 1879, $10,000 of which has been paid in. By direction of the executors, the income of this foundation is to be used for a series of from four to six public lectures before the University annually, at least one half of which shall be on subjects of current scientific interest. The lectures are to be printed and distributed among schools and libraries generally. The Vanuxem Lecturer for

this year is Professor Senator Vito Volterra, D.Phys., D.Sc., D.Phil., D.Math., of the University of Rome, Italy, who delivered a course of lectures in October on "Permutable Functions with Applications to Integral Equations."

THE ALBERT PLAUT CHEMICAL CLUB FUND

Established in 1912 with a gift of $5,000 by Mr. Albert Plaut, of New York. The income is to be used for the benefit of the Chemical Club, and primarily for providing lectures before the club by men of distinction in the field of industrial chemistry or a related science.

LECTURES ON MENTAL HYGIENE

Dr. Stewart Paton, of the Class of 1886, Lecturer on Biology, will deliver occasional public lectures before the University during the present winter, on the Study of the Brain in Relation to Educational and Social Problems.

VII

GROUNDS AND BUILDINGS, AND INSTITUTIONS CONNECTED WITH THE UNIVERSITY

GROUNDS AND BUILDINGS

The Campus

During the first decade of its existence, the College of New Jersey owned neither grounds nor buildings. The College exercises were held either in the house of the President or in convenient rooms elsewhere.

From the beginning, however, it had been the purpose of the Trustees to erect college edifices in a central part of the State and there locate the institution permanently. It was voted, May 15, 1751, therefore, that the necessary buildings should be erected at New Brunswick, provided the citizens of that place secured to the College the sum of one thousand pounds proclamation money, two hundred acres of woodland, and ten acres of cleared land. An offer of these terms was also made by the inhabitants of Princeton at the same meeting of the Trustees, and when, in September, 1752, it was learned that New Brunswick had not complied with the required terms, the Princeton offer was formally accepted. The particular tract of ground which became the site of Nassau Hall was given by Nathaniel Fitz-Randolph and the money guarantee was furnished by Messrs. John Stockton, Thomas Leonard and John Horner, all wealthy residents of the village.

The University campus consists roughly of four tracts of land adjoining each other. The central portion, of about two hundred and twenty-five acres, forms a quadrangle bounded by Nassau Street on the north, Washington Road on the east, the lake on the south, and the line of the Pennsylvania Railroad on the west.

The western portion, known as Springdale Farm, which was presented to the University in 1905, consists of two hundred and twenty-one acres, lying between the Theological Seminary and Stony Brook.

The third portion, known as the Olden Farm, lying on the eastern side of Washington Road, was also presented to the University in 1905. It consists of ninety-three acres and includes Laughlin Field and the woodland lying between the line of the clubs on Prospect Avenue and the lake.

The fourth portion, which bears the name of the "Butler Tract", was presented to the University in 1912. It lies next to a piece of land owned by the Lake Carnegie Association adjoining the Olden Farm, and contains upwards of ninety-three acres. The Butler Tract, together with the land of the Lake Carnegie Association, forms a continuous property of about four hundred and thirty acres, with a frontage of over a mile and a half on Lake Carnegie.

All the University buildings are heated by steam and lighted with electricity, and in addition, with the exception of those in Reunion Hall, almost all studies are provided with open fire-places. Every entry in each of the dormitories is provided with a lavatory, containing shower baths and other toilet facilities.

Nassau Hall

Nassau Hall, the oldest and historically the most interesting building on college property, is picturesquely situated on the most elevated point of the front campus. At the time of its completion in the autumn of 1756, it was the largest academic building in the country. It was designed by Robert Smith, of Philadelphia, and was built of sandstone quarried in the neighborhood, and is now covered with ivy. In its three stories and basement it formerly contained, exclusive of the prayer hall or chapel, which

occupied the central portion of the building, sixty rooms, which included refectory, library, and recitation rooms. It was named Nassau Hall in honor of William of Nassau, Prince of Orange, William III of England. During the Revolution it served at different times as hospital and barracks for American and British troops; here from June to November, 1783, the Continental Congress sat, and here, on the twenty-sixth of August, Washington received the thanks of Congress for his conduct of the war of the Revolution.

Changes in the interior, consequent upon two disastrous fires in the last century, have strikingly altered the arrangement of the building. The large central hall on the main floor has been remodeled and is now the Faculty Room of the University. At the present time the east wing contains the offices of the President, the Secretary, the Dean of the College, the Registrar, the Committee on Examinations and Standing, the Editor of the Official Publications of the University, and the Editor of the General Catalogue. The west wing contains the office of the Dean of the Graduate School. On the third floor of the west wing are the laboratories of experimental psychology.

The Dean's House

A house for the President of the College was erected in 1756, and until 1878, when Prospect was acquired by the Trustees, it continued to be the presidential residence. Since the creation of the office of Dean of the Faculty the house has been the official residence of the Dean.

The University Offices

In 1803 a stone building containing recitation rooms, a library, and an apartment for the two literary societies of the College, the Cliosophic and the American Whig,

was erected west of Nassau Hall. This building now contains the offices of the Treasurer, and the several offices of Business Administration.

Prospect

Prospect, the official residence of the President of Princeton University, is one of the oldest estates in the town, although it was not acquired by the University until 1878. The mansion, erected in 1849, is beautifully situated in extensive grounds, the main entrance to which opens on McCosh Walk.

Dickinson Hall

This building, the gift of John C. Green, Esq., is used for the class-room work of the Academic Department. It was erected in 1870 from the designs of George B. Post, of New York, and is built of local stone trimmed with Connecticut limestone. It was named by Mr. Green as a memorial of Jonathan Dickinson, the first President of the College. In 1876 extensive alterations were made in the building and the exterior was much changed.

The School of Science Building

The School of Science Building was erected in 1873 and liberally equipped by John C. Green, Esq., a benefactor of the institution in many ways. It is devoted to the purposes of instruction in the Department of Civil Engineering.

On the first floor are located the civil engineering lecture rooms and laboratories, and other class-rooms. On the second floor are the astronomical lecture rooms and the drawing-rooms of the department of graphics. In the graphics room is a set of duplicates of the more important Olivier models of ruled surfaces; here also are the Björling developable surface models, a number of the Muret set, and the Shröder mathematical models.

In the basement of the building are other recitation rooms and the machine shops of the School of Science, and connected with it is the dynamo building of the School of Electrical Engineering.

MARQUAND CHAPEL

CHARLES EGBERT BURNHAM, *Choirmaster.*
CHARLES GILDERSLEEVE VARDELL, JR., *Organist.*

The chapel was the gift of the late Henry G. Marquand, Esq., of New York. The cornerstone was laid in June, 1881. The building is constructed of brownstone, and is cruciform in shape. The apse contains the organ and choir stalls. The gallery over the main entrance is used in part for visitors. The faculty stalls are along the sides of the building. The mural and window decorations are noteworthy. The St. Gaudens' heroic bronze high relief of the late President McCosh, erected by the class of 1879, faces the visitor on entering; by its side are the low relief memorial tablet to Professor Joseph Henry and the bronze tablet to Professor Arnold Guyot, set in a fragment of a Swiss glacial boulder presented by the authorities of his native city, Neuchatel. On the east wall of the south transept is the memorial tablet to the Rev. James Ormsbee Murray, first Dean of Princeton University, presented to the University in November, 1901. This tablet consists of rose-colored Numidian marble, upon which is a medallion portrait in bas-relief of white marble, surrounded by an embossed wreath. On the north wall is a bronze memorial tablet to the Faculty of the early Sixties, erected by the class of 1863.

The south and north windows, by Lathrop, are in memory of Frederick A. Marquand, of the class of 1876, and William Earl Dodge, of the class of 1879. The west window, by Tiffany, is the gift of Mrs. T. Harrison Garrett, of Baltimore, in memory of her son, Horatio W. Garrett,

of the class of 1895. The Sunday and daily morning services are held in the chapel.

Alexander Hall

This building, the gift of Mrs. Charles B. Alexander, is used for Commencement and Class Day exercises, public lectures, and other university gatherings of a general character. The auditorium is arranged with sloping floor and high gallery so that an audience of fifteen hundred may be comparatively near the speaker. The rostrum and President's chair are finished in colored marbles and polychromatic mosaic. Behind the rostrum is a row of mosaic wall pictures, designed by J. A. Holzer, illustrative of the Homeric story. A large organ built by George Jardine and Son, embodying the most recent features of organ construction, stands in one of the small galleries near the rostrum.

The building is constructed of granite and brownstone, and is Romanesque in style. The front toward the south exhibits a large rose window beneath a gable roof, and between the central structure and two side towers are two fine round-arched openings which lead into a wide ambulatory encircling the building. From this ambulatory the rostrum and auditorium are reached. The two side towers and two smaller ones at the rear enclose staircases, which lead to the auditorium gallery. The building, which was designed by William A. Potter, has been decorated with sculpture, under the direction of the architect, by J. Massey Rhind. Beneath the rose window on the south front is a seated figure of Learning, on one side of which are allegorical figures of Architecture, Sculpture, Painting, Poetry, Music, and Belles Lettres; on the other, of Oratory, Theology, Law, History, Philosophy, and Ethics. There are other sculptures about the rose window and in the niches around the ambulatory.

Isabella McCosh Infirmary

John McDowell Carnochan, M.D., *University Physician.*
Bessie Louise Dickson, *Infirmarian.*

The healthfulness of the town of Princeton is exceptionally great, the report of the State Board of Health showing that among towns in New Jersey having a population of 5,000 or more the mortality at Princeton is easily the lowest. Nevertheless, the illness incident to a university community, slight though it ordinarily is, demands special accommodations. The "Isabella McCosh Infirmary," erected in 1892 by alumni and friends of the University, is the University hospital. It is equipped with all the most modern conveniences and necessaries of hospital construction, and comprises two separate buildings connected by a corridor. One of these is reserved as a ward for contagious diseases and for cases requiring special isolation.

As the Infirmary is not fully endowed each student pays an annual fee of $7 ($3.50 per term) which in all cases of ordinary illness procures for him, without charge, the necessary care, including board, nursing, laundry, and physician's fees. When an illness extends beyond a week board is charged after the first week at the rate which the student pays at his usual boarding place. While he is at the Infirmary his board is rebated at his boarding place. Ordinary consultations are given daily by the University Physician at his office in the Infirmary, free of charge. The Infirmary is under the constant and careful supervision of the University Sanitary Committee. The Infirmarian, who is an experienced trained nurse, and three assistant nurses are in residence, and a housekeeper and regular servant staff are maintained. Where special nursing is required an additional charge covering actual expenses is made.

Proprietors of lodging houses where students live in town are required to report to the Secretary of Business Administration any cases of illness which occur in their houses. The University Physician is immediately notified and if in his judgment the student should be removed to the Infirmary he orders the student to be removed, and so reports to the Infirmary. The Infirmarian reports to the office of the Secretary of Business Administration when a student is admitted to or discharged from the Infirmary. Similarly, if a student is found ill in a dormitory room his janitor reports the fact to the office of the Superintendent of Grounds and Buildings, who in turn notifies the University Physician.*

The Fitz Randolph Gate-Way

The Fitz Randolph gate-way, the gift of the late Augustus VanWickle, was erected in 1905 as a memorial of his ancestor Nathaniel Fitz Randolph, the donor of the ground on which Nassau Hall stands.

This gate-way, designed by Messrs. McKim, Mead and White, forms the main entrance from Nassau Street to the campus and is placed directly in front of the steps of "Old North." Facing Witherspoon Street there are four large limestone gate-posts decorated in front and back with the carvings of the arms of the University and surmounted by two eagles carved from the stone. The fence accompanying the gate-way extends along Nassau Street from the Dean's house to the Library entrance.

McCosh Hall

This collegiate Gothic building of Indiana limestone, erected in 1907 by friends in memory of the late President

*For Infirmary Regulations, see page 307.

McCosh, composes one side of a contemplated quadrangle. It was designed by Raleigh C. Gildersleeve.

It is over 400 feet long and contains 18 lecture rooms and 26 rooms for preceptorial conferences. It contains one room seating 600 persons, one room seating 400, four rooms seating 75, four rooms seating 65, and six seating 50 each. The University Stock Room is located in the basement.

The Hall is fireproof and heated, ventilated and lighted by the latest methods.

Sun Dial

The Sun Dial, in the center of the court just north of McCosh Hall, was erected in 1907, the gift of Sir William Mather, M.P., of London. It is an exact replica of the Turnbull Sun Dial at Corpus Christi College, Oxford.

DORMITORIES

West College

West College, built in 1836, is the oldest dormitory building still standing. It forms the western side of the central quadrangle and contains forty suites of rooms.

Reunion Hall

Reunion Hall, erected in 1870 on the site of Professor Joseph Henry's residence, was so named to commemorate the reunion of the Old and New Schools of the Presbyterian Church. Prominent members of each party gave the funds by which it was built, and its cornerstone was laid by the officers of the General Assembly.

Witherspoon Hall

Witherspoon Hall, named after Princeton's president of Revolutionary days, the signer of the Declaration of Independence, was built in 1877. It contains sixty suites. Built

of gray stone with brownstone trimmings in the Victorian Gothic style, it towers above the neighboring buildings on the western section of the campus and forms the north side of the quadrangle enclosed by Edwards and Stafford Little Halls.

Edwards Hall

Edwards Hall, a brownstone Gothic building, is named after President Jonathan Edwards and contains eighty-four rooms. It was erected in 1880.

Albert B. Dod Hall

Albert B. Dod Hall, the gift of the late Mrs. David Brown, of Princeton, was erected in 1890 in memory of her brother, Professor Albert Baldwin Dod, of the class of 1822. It was designed by John Lyman Faxon. It is a long, massive structure in the Italian style, of granite with limestone trimmings; while the columns flanking the entrance are of Georgia marble. The carving over the main entrance is Byzantine. The building has accommodations for one hundred students.

David Brown Hall

David Brown Hall, another gift from Mrs. Brown, was erected in 1891 in memory of her husband. This building was also designed by John Lyman Faxon. It is modeled after a Florentine Renaissance palace, and forms a hollow square of four stories enclosing a courtyard 67 by 44 feet. The first two stories are of granite, the two upper stories of Pompeian brick. A granite seat runs the length of the front facade. This dormitory, which contains fifty suites, is situated at the edge of Prospect gardens and overlooks the long slope towards the lake and the landscape beyond.

Blair Hall

Blair Hall, a Sesquicentennial gift of the late Hon. John Insley Blair, and built from the designs of Messrs. Cope and Stewardson, was the first representative of the style of architecture which has since been adopted for the later Princeton buildings. Blair Hall is built of white Germantown stone, in the English collegiate Gothic style, and contains fifty-three suites. The square massive central tower is pierced by an archway which, with the terraces and flight of steps, forms the entrance to the campus from the southwest. An addition, with a gateway tower, has been erected by De Witt Clinton Blair, Esq., of the class of 1856.

Little Hall

Adjoining the southern end of Blair Hall and following out that building's line and style on a slightly lower level of ground is Stafford Little Hall, a dormitory containing sixty-two suites of rooms, the gift of the late Henry Stafford Little, of the class of 1844. It was erected partly in 1899 and partly in 1902 and forms, with Blair Hall at one end and the new Gymnasium at the other, a series of architecturally harmonious buildings marking the western confines of the campus. This building was also designed by Messrs. Cope and Stewardson.

University Hall

University Hall, at the junction of Nassau street and University Place, was originally planned as a hotel. The first and second floors are now used by the University Dining Halls, while the upper stories serve as a dormitory.

The Pyne Buildings

The two other dormitories on Nassau street are the Upper and Lower Pyne Buildings, the latter being on the corner of Nassau and Witherspoon streets. These build-

ings were erected in 1896 by M. Taylor Pyne, Esq., of the class of 1877, and are in the half-timbered Chester style. They were designed by Raleigh C. Gildersleeve.

Seventy-nine Hall

Seventy-nine Hall, a gift of the class of 1879, is a development of the Tudor Gothic, so extensively used at Oxford and Cambridge, and in the recent buildings at Princeton, and was designed by Benjamin W. Morris.

It is two stories in height, with a basement. The walls are of red brick, the trimmings of Indiana limestone. Toward the middle and directly opposite Prospect Avenue is a tower which forms the principal feature of an asymmetric composition. The Hall accommodates forty-eight students.

Patton Hall

Patton Hall, a dormitory furnishing accommodations for one hundred men, is the gift of the ten classes from 1892 to 1901, inclusive. This building, erected in 1906 from the plans of Benjamin W. Morris, is the latest addition to the graceful line of Gothic architecture marking the western confines of the campus and is built of the same material and conforms in style to Blair and Little Halls.

Campbell Hall

This dormitory is the gift of the class of 1877. The style is English collegiate Gothic, similar in type to that of Blair Hall, the materials being the same. It provides accommodations for sixty men. It was erected from the designs of Messrs. Cram, Goodhue and Ferguson.

Holder Hall and its Proposed Additions

Plans have been made for an imposing group of buildings, chiefly dormitories, to occupy the space at the south-

east corner of University Place and Nassau Street. An excellent model of these proposed buildings may now be seen in the University Library.

A considerable part of this group, forming four sides of a large courtyard, together with the Great Tower on Nassau Street, have been built through the generosity of Mrs. Russell Sage, from designs of Messrs. Day Brothers & Klauder. To this group of buildings Mrs. Sage has given the name of Holder Hall.

The body of the walls is of Princeton stone, with doorways, windows, cornices, etc., of Indiana limestone. The roof is of very heavy graduated stone slates and the windows have metal casements with leaded glass. The floors are constructed of reinforced concrete and the partitions of terra cotta.

There are three floors available for the use of students, of whom 149 can be accommodated.

Hamilton Hall

This dormitory, built in 1911 from designs of Messrs. Day Brothers and Klauder, fronts on University Place and adjoins Holder Hall on the southwest. It accommodates 41 students. It has been erected chiefly by the generosity of the classes of 1884 and 1885. It is of the same style and material as Holder Hall and forms the southern side of a quadrangle which will ultimately occupy the corner of the campus at the junction of University Place and Nassau Street.

Cuyler Hall

This dormitory joins Patton Hall and was built in 1912 from designs of Messrs. Day Brothers and Klauder. It is named in memory of Cornelius C. Cuyler of the Class of

'79. Five of the six entries are the gifts of the Classes of 1881, 1882, and 1891, and of Mr. William E. Guy '65 and Mr. J. O. H. Pitney '81. The large entry at the southeast corner was built with funds contributed by a large number of alumni. It is of the same style and material as Holder and Hamilton Halls and provides rooms for 67 students.

LABORATORIES AND MUSEUMS

Halsted Observatory

Henry Norris Russell, Ph.D., *Director of the Observatory.*

This observatory is appropriated to scientific work, chiefly in the department of astronomical physics. The building, the gift of the late General N. Norris Halsted, is of stone, with a dome thirty-nine feet in diameter, the power for moving it and its sliding shutter being furnished by an electric motor and a storage battery. In it is mounted the great equatorial, of twenty-three inches aperture and thirty feet focal length, made by the Clarks, and provided with all the usual accessories, micrometric, spectroscopic, and photometric. The building also contains a clock and a chronograph, and is in electric connection with the Observatory of Instruction.

Observatory of Instruction

This observatory is devoted entirely to the use of students and is fully equipped for its purpose. It possesses an equatorial (by Clark) of 9½ inches aperture, with a full complement of spectroscopic and other accessories. It has also a 9-inch reflector; a meridian circle, with circles 2 feet in diameter, and a 4-inch telescope; three transit instruments with 3-inch telescopes, two of them arranged for use as zenith telescopes; a chronograph; two standard clocks and five subsidiary clocks, one in each observing room. There are also a number of sextants, two chronometers, and all the other auxiliary apparatus required for carrying out the work in the courses on practical astronomy, to accommodate which a room for lectures and recitations has been added.

Psychological Laboratory

The laboratory for experimental psychology, established in 1893, at present occupies the entire third floor of the west wing of Nassau Hall. It comprises a lecture room, reading room, dark-room, and several rooms for research work. The equipment consists primarily of the standard pieces of apparatus for demonstrations and research, together with illustrative models and charts, and is extended to meet the requirements of graduate research in any special direction. A select library of reference books and bound periodicals belonging to the department is kept in the reading room. A private psychological library of several hundred volumes, with current numbers of leading psychological, philosophical and neurological journals, is also kept at the laboratory and is available to graduate students for consultation.

The Palmer Physical Laboratory

The Palmer Physical Laboratory, the gift of S. S. Palmer, Esq., of Princeton, was completed in 1908 and is devoted to the uses of the Departments of Physics and Electrical Engineering. It was designed by H. J. Hardenbergh.

It is a two story and basement building of brick and Indiana limestone and is academic Gothic in style. It is constructed with very heavy walls, and with floors of steel, tiling and concrete, is thoroughly fireproof and possesses the greatest stability. It is built on a southern slope around three sides of an open court, thus assuring an abundance of light and air for the basement as well as for the two upper stories.

The building is heated by steam, with thermostatic control, is lighted by electricty and is arranged for the artificial ventilation of any, or all, of its parts.

It contains two large lecture rooms, one for 325 persons and the other for 200, three smaller lecture rooms for

sixty-five persons each, seven recitation rooms, each for twenty-five persons, four large laboratories and a number of smaller ones, rooms for the professors, for the library, the museum and for research students. One large and two small machine shops are provided, rooms are set aside and equipped for the storage batteries, electrical charging machinery, and switchboards; and a chemical laboratory, a Roentgen ray room, constant temperature rooms and a grating room have been especially constructed, in addition to store rooms, balance rooms and photographic and photometric dark rooms. The three floors give a combined area of approximately two acres for the work of instruction and research.

The equipment includes four storage batteries of sixty cells each, the necessary electrical charging machinery, a very extensive and flexible system of wiring for both direct and alternating currents, a refrigeration plant, a liquid air and hydrogen plant, a vacuum and pressure system leading to all parts of the building, a large machine shop with a full outfit of hand and machine tools and an electric elevator running from basement to attic. A large equipment of apparatus is provided for lecture purposes, for laboratory work and for research.

Through the generosity of David B. Jones, Esq., of the class of 1876, and of Thomas D. Jones, Esq., of the class of 1876, a fund of $200,000 has been given for endowment, the income of which is to be used by the two departments occupying the Laboratory, for the purchasing of supplies, for the construction of apparatus and for the satisfaction of the general scientific needs of the two departments.

Buildings and Apparatus of the School of Electrical Engineering

Ample accommodations for recitations, lectures and experimental work are provided in the Palmer Physical La-

boratory. All of the equipment of that building and all of the apparatus of the Department of Physics are available for the use of the School of Electrical Engineering. The Laboratory contains a full equipment of galvanometers, current balancers, direct and alternating current ammeters, voltmeters, and watt-meters; frequency and power factor meters, resistances, bridges and potentiometers; standards of resistance, inductance and capacity; a Dudell oscillograph, a Fleming cynometer, etc.

A room has been especially equipped for the comparison with standards, of the various instruments required, in precise electrical measurements.

A room adjoining one of the storage battery rooms has been set apart and is being equipped with electric furnaces for electrochemistry and high temperature work.

The Dynamo Building contains a complete equipment of electrical machinery, and is set apart entirely for experimental work and machine testing. The motive power for the machinery is furnished by a sixty-horse-power boiler and a Ball engine. The dynamo plant consists of a Westinghouse alternating current generator with a full set of transformers, a Westinghouse direct current generator, two Westinghouse rotary converters, Mather, Edison, Brush arc, Eickemeyer, and Gramme generators, a machine constructed in the shop of the School of Science, General Electric, Westinghouse, Brush, Eickmeyer, and other motors. With these machines is a complete outfit of accessories, and a large rheostat of German silver used in testing. Arc and incandescent lamps are so arranged that the various systems of distribution may be studied.

The University Power Plant, which is used for lighting and heating the University buildings, contains six 250 horse-power boilers, for power and steam heating; two 200 K. W. and one 100 K. W. direct-connected alternating current generators and one 300 K. W. alternating current

generator, direct driven by a Curtis steam turbine; one motor-driven exciter and one steam turbine-driven exciter; the station switch-board and a special experimental switch-board. The entire equipment of generators, transformers, motors, etc., is available for the use of the School, for purposes of experimental study in which the quantities to be measured are of the order of those met with in commercial applications.

Chemical Laboratories

All courses in chemistry and in mineralogy are conducted in the chemical building, which is of fireproof construction, well lighted and ventilated.

The top floor of the building is mainly devoted to laboratories for students in the various courses for general, analytical, and organic chemistry, with private laboratories, weighing room, and storerooms. Each student has a separate desk, provided with water, gas, suction for filtering, and sink.

On the second floor are two large lecture-rooms, cabinets for specimens and lecture apparatus, and several private laboratories.

In the basement, in addition to storerooms and several private laboratories, are a furnace room, the laboratories for physical chemistry, and a laboratory for research students.

Guyot Hall

The Natural Science Departments are housed in Guyot Hall, which was erected in 1909 from the designs of Messrs. Parrish and Schroeder.

This building is situated at the southeast corner of the campus on the southerly slope below the Palmer Physical Laboratory and beyond it fields, woods and brooks extend down to Carnegie Lake, thus affording unrivalled opportunities for biological gardens and vivaria. The inside

dimensions of the building are 288 feet long and 56 feet wide, with a south extension 63 feet long by 35 feet wide. Its central section has a basement and four stories, and the ends and extension have three and two stories respectively. With a cubical content of about 1,250,000 cubic feet it has a total serviceable floor space of about 85,146 square feet.

Architecturally it is a successful application of the English Gothic style to the strict requirements of modern laboratory construction. The chief material used is brick of variable light red tone with Indiana limestone trimmings, and the construction is fireproof, being of steel, reinforced concrete, and plaster block.

The approved features of modern laboratories of this class have been adopted; simplicity of design, stability, fireproofing, maximum of window lighting, use of sound-proof though easily removable partitions, with generous provision of electric illumination and power, gas, and water supply. Two freight elevators, one electric, the other hand power, run from cellar to top floor. The general artificial illumination is provided by the alternating current system, and a 30 K. W. motor-generator set furnishes direct current for the projection and photo-illumination apparatus. Abundant gas supply is at hand for secondary illumination and heating on laboratory tables. Natural ventilation is relied on to a large extent, almost entirely so in the west end of the building. A ventilating plant provides tempered forced draft and exhaust for the corridors, museum, lecture room, reading room, and certain laboratories where noxious fumes and odors may be generated. Independent minor exhaust systems care for the proper circulation in the photographic rooms.

The Departments of Biology and Geology occupy approximately equal portions of the building, Biology having the eastern and Geology the western end, and certain rooms

are used in common; *i. e.*, the museum room, the large lecture room, the general library and reading room. The museum occupies the entire first story, having a height of 18 feet, and, with its gallery along the south side of the central section, affords about 19,300 square feet of floor space. The lecture room, central in the basement, with 210 seats, has brilliant natural and artificial illumination, and is provided with all appurtenances needed for conducting lecture courses and meetings of scientific societies. The library, centrally located on the second floor, has a reading room space of 25 x 25 feet and lateral stacks holding the working libraries of the biological and geological sciences, with capacity for about ten thousand volumes.

The laboratories are arranged in ten separate suites, each suite as a rule accommodating a distinct subject, and five suites each are in each department. In addition there are rooms for graduate students, and for investigators, seminary rooms, a club room for students of the Department of Geology, machine shops, curatorial, preparation, and store rooms, and finely equipped quarters for photographic work. Special rooms are designed for seismographical and meteorological stations. Excluding several rooms used for janitorial and other purposes, 103 rooms are devoted to the work of the scientific departments.

The Natural Science Museum

William Libbey, D.Sc., *Director of the E. M. Museum of Geology and Archaeology.*
Walter Mead Rankin, Ph.D., *Curator of the Herbarium.*
Alexander Hamilton Phillips, D.Sc., *Curator of Mineralogy.*
Gilbert van Ingen, *Curator of Invertebrate Palaeontology.*
William John Sinclair, Ph.D., *Curator of Vertebrate Palaeontology and of Prehistoric Archaeology.*
Charles Frederick Silvester, *Curator of the Zoological Museum.*

The Natural Science Museum, occupying the first floor of Guyot Hall, with a floor area of about 19,300 square feet,

contains the collections formerly included in the E. M. Museum of Geology and Archaeology, the storerooms of the Department of Geology, the Museum of Biology, the Class of 1877 Morphological Museum, and the Mineralogical Museum of the John C. Green School of Science.

The Zoological Collections are especially rich in osteological and ornithological material. The former includes a large number of mounted and disarticulated skeletons of fishes, reptiles, birds and mammals. The collections of mounted and unmounted bird skins are especially large, including some sixteen thousand individuals, representing very completely the avifauna of New Jersey, and in part that of North America, Europe, Indo-Asia, Australia, and South America. These collections are supplemented by some four thousand sets of eggs, most of them in nests.

The collections of Invertebrata include a complete series of specimens prepared by the Zoological Station at Naples, as well as a large series of corals and shells of molluscs.

The Morphological Museum contains about twenty-six hundred preparations, illustrating the comparative anatomy of vertebrates. This collection, which consists of dissections and corrosions, is being increased constantly at the rate of about three hundred preparations a year, all of which are prepared in the laboratory by the Curator and his assistants.

The Histological Collection is located on the second floor of the building and consists of some thirty thousand mounted microscopical specimens illustrating the various forms of tissues of many different animals; some five thousand specimens are stored in paraffin blocks.

The Botanical Collections are arranged on the third floor and include, besides certain illustrative specimens, models and charts, a Herbarium of mounted plants, classified according to Engler and Prantl's *Pflanzenfamilien*. The Her-

barium includes a local collection, representing the New Jersey flora, of four thousand sheets; some forty thousand sheets of plants from different sections of the United States, from South America, Europe and Asia, and ten thousand sheets of mosses, recently acquired from Dr. Per Dusén of Sweden.

The Geological Museum has exhibits arranged in three general groups to show the structure of the earth, the history of the earth, and the ancient life of the earth.

The central portion of the west hall is devoted to exhibits of the structural materials that make up the crust of the Earth, the minerals and rocks, and of specimens that show tectonic features of the crust, and the modes of occurrence of economic minerals and ores.

At the end of the west hall is a synoptical collection illustrating the geology of the vicinity of Princeton.

The cases around the sides of the west hall are arranged on the enclosed-alcove plan, forming a continuous series of small rooms. Each room is devoted to a period of geological time and the contained exhibit consists of rocks, fossils, maps, and labels illustrating and describing the history of the period.

The west half of the middle hall contains the exhibits of the ancient vertebrate life of the Earth.

The archaeological and ethnological exhibits, occupying the entire gallery, portray the culture of various races of Palaeolithic, Neolithic, and savage mankind.

Circulars describing the exhibits are issued from time to time. Two have appeared: The Archaeological-Ethnological Collections, and the Princeton Local Geology Collection.

The teaching collections, placed in the laboratories, are arranged in series that illustrate the various courses of instruction. In addition there are reserve collections available for advanced study and research, and collections that have

been accumulated in the course of investigations prosecuted by the officers of the department.

The teaching and study collections are being rapidly augmented through the field trips in the Appalachian region conducted as part of the regular work of the Department of Geology, and through the summer field work prosecuted in various regions by the officers and graduate students.

The Geological Laboratories

The laboratories of the geological sciences occupy the western half of Guyot Hall, and have a floor area of about 19,700 square feet, of which about 13,800 square feet are devoted to the various phases of the instruction work and the remainder to preparation and curatorial purposes. The museum, general lecture room and library are shared in common with the Department of Biology. The Geological Library has about four thousand volumes.

Distinct suites of apartments are devoted to the following lines of study: Structural Geology, Petrology and Economic Geology, Mineralogy, Physical Geography, Stratigraphy and Invertebrate Palaeontology, and Vertebrate Palaeontology. There are in addition a large graduate laboratory and several small rooms for carrying on special investigations. A suite of rooms is designed for the illustration work of the Department of Geology, comprising an artist's studio, photographic studio for lantern slide and photomicrography as well as for ordinary camera work, a room for blue-printing, and four dark rooms, of which three may be assigned to graduate students. Seismographic and meteorological stations are designed, but not yet equipped.

The club room for the departmental students is located on the second floor, and is provided with literature pertaining to the undergraduate courses in geology, and also with standard works in the allied sciences.

Further details regarding the resources and collections of the Department of Geology may be obtained by consulting the Announcement of the Department of Geology, which may be secured from the office of the Secretary of the University.

The Biological Laboratories

The Biological Laboratories are located in the east half of Guyot Hall and comprise, in addition to the museums, the library, laboratories, research rooms and seminary rooms of the Departments of Zoology, Physiology and Botany.

The Biological Library consists of about three thousand volumes. It contains sets of the principal biological periodicals, as well as standard reference books and monographs; through the generosity of Charles W. McAlpin, Esq., of the class of 1888, several hundred volumes are added to it each year.

The Zoölogical, Anatomical, and Histological Laboratories include five classrooms, equipped as laboratory-lecture rooms, seven private research rooms, two preparation rooms, a chemical room, two photographic rooms, an artist's room and six storerooms.

The Physiological Laboratory comprises one large laboratory-lecture room, two smaller laboratories, three private research rooms, a photographic room and a storeroom; it closely adjoins the animal rooms in the sub-basement and vivarium.

The Botanical Laboratory includes, at present, one laboratory-lecture room, four private rooms and the herbarium room. A greenhouse and vivarium afford at all seasons, a considerable variety of land, freshwater, and marine plants for study. It is hoped that in the near future the extensive

grounds south of Guyot Hall may be laid out as a botanical garden and arboretum.

Vivaria

The study of living plants and animals is a most important part of Biology and unusual facilities are here offered for such study. In addition to the natural advantages of the situation, afforded by the presence, in the immediate vicinity of the Laboratory, of fields, woods, brooks, Lake Carnegie and the canal, especial preparations have been made for keeping under experimental and observational conditions a considerable variety of animals and plants. The Vivarium is a separate building with glass roof and large concrete aquaria; the latter have an aggregate area of nearly four hundred square feet, one half of which is devoted to sea-water and the other half to fresh-water. In addition there are rooms with suitable cages for keeping insects, amphibians, reptiles, birds and mammals; also private research rooms, photographic rooms and pump rooms. Adjoining the building are flying cages for birds, runways for mammals, and a greenhouse for plants. Near the Vivarium a biological pond has been formed by damming up a brook, and various cages and retreats will be established along the brook and in the woods where many animals may be kept and studied under natural conditions.

Civil Engineering Laboratory and Apparatus

Through the generosity of the trustees of the John C. Green estate a separate building has been provided and equipped with suitable apparatus for training the students in civil engineering in the laboratory work of engineers. The building covers an area of about 7,000 square feet and is divided into five commodious rooms, in which the students are taught, in connection with and supplementing the corre-

sponding theoretical studies, to make tests of structural forms and materials; to conduct trials of steam, gas, and other motors; to deduce from actual experiment laws and coefficients of flow through various kinds of orifices, weirs, and conduits; and to make reliable tests of cements, mortars and concretes.

The additional apparatus has been carefully chosen with a view to its value as a means of cultivating the perceptive faculties of the students, of stimulating originality of thought, and of making clear many points in the later studies of the course which otherwise might remain ill-defined because imperfectly conceived. But its selection has also been influenced by the expectation that some of it will be employed in original investigation along lines of engineering knowledge as yet only partially developed.

There have been added to the previous laboratory equipment of the Department four new electrically driven testing machines, of different capacities, with all necessary accessories, the largest having a capacity of 200,000 pounds: a steam boiler of about seventy horse-power to furnish power and the means of conducting evaporative tests; a steam engine of fifty horse-power, provided with a dynamometer, and other appliances for testing power and efficiency; and an Otto gas engine of about six horse-power. The cement room is now provided with three standard cement testing machines, made by different makers of established reputation, and is amply equipped with other paraphernalia of a cement-testing establishment. The outfit of the hydraulic room is very complete in provisions for the control of pressures and volumes, and is unique in its use of large quantities of water in a very economic manner.

The illustrative apparatus of the Department covers a wide field, and comprises rail sections and joints, specimens of the products of iron and steel mills and other build-

ing materials, models of water wheels, of trestles, of the details of joints of steel bridges and roofs, and of vaults and arches. A collection of lantern slides, especially selected for use in the classroom, has been provided, and includes a large number of views, in detail, of the New York and Brooklyn Roebling suspension bridge at different stages of its erection, as well as similar views of other structures. A 25-foot iron working model of a single-track railway bridge, with a complete outfit of falsework and other appliances for its erection, designed especially for this institution, is employed to illustrate by actual trial the modes of procedure in problems of erection.

The instruments provided for the course in geodesy represent the work of several instrument makers of high repute. They include a 12-inch geodetic transit; a large plane-table with telescopic alidade and a telemeter; engineer's, mining, and solar transits; wye and dumpy levels; surveyor's compasses; mercurial and aneroid barometers; sextants; heliotropes; numerous forms of standard linear measures; and a large assortment of reconnoitering instruments.

The Museum of Historic Art

Allan Marquand, Ph.D., L.H.D., *Director of the Museum of Historic Art.*

The upper story of the Museum contains a library of books and photographs of classical and mediaeval archaeology, collections to illustrate the history and processes of the graphic arts, reproductions of Greek and Roman coins and gems, specimens of Greek and Roman marble, a collection of bronze medals and casts of ivories from the Roman to the Gothic period, a series of casts from the Arch of Trajan at Beneventum, and a small collection of paintings. One

room is devoted to exhibiting the results of the Princeton Expeditions to Syria. Here, besides casts of sculpture and inscriptions, are many examples of Syrian workmanship in stone, terra-cotta, glass, bronze, and gold.

In the central story the Trumbull-Prime collection has been rearranged and new cases have been added. The purpose of this collection is to illustrate the history of pottery and porcelain. Egypt is represented by sepulchral figurines, beads, and amulets; Phoenicia by numerous Cypriote vases; Greece, Etruria, and Southern Italy by Corinthian aryballoi and fine examples of larger vases of black-figured and red-figured types. The Orient is further illustrated by specimens from Persia, China, and Japan; South America by Peruvian pottery. The collection is richest in examples of European wares, to which England, France, Germany, and Holland are the chief contributors, but Italy, Russia, Sweden and Switzerland are also represented. The small room of this story contains the Livingston collection of pottery. This collection is noteworthy for the illustrative material it furnishes for the early history of our country.

The staircase and basement are occupied by a carefully selected collection of casts of ancient and mediaeval sculpture, presented by the class of 1881 at its decennial. This collection was formed to illustrate the history of ancient sculpture in Egypt, Babylon and Assyria, Persia, Greece and Rome, and of mediaeval sculpture in Italy, France, and Germany. There has been recently added from the same fund a collection of casts of Renaissance sculpture.

The Museum is open to visitors from 9 A. M. to 5 P. M., and from 8 to 10 P. M.

SOCIETIES

Literary Societies

The Cliosophic and American Whig Societies were founded prior to the Revolution. They are conducted by the undergraduates, but also include in their organization graduates and officers of the University. Each possesses a valuable library. The old halls in which they were accustomed to meet, becoming too small for their accommodation, were removed about 1890, and large and handsome buildings of white marble were erected near the old sites. Both Societies pursue courses of literary exercises, award numerous prizes for orations, essays and debates, and grant diplomas to their respective graduates.

A generous competition for University honors has always prevailed between them. Representatives of the Societies engage in a public debate, and during Commencement week representatives from the Junior class engage in a competition in oratory. The details respecting the Lynde debate and Junior orations will be found on pages 365 and 370 respectively.

The Philadelphian Society

The Philadelphian Society is an institution of undergraduates for the promotion of the religious interests of the University, particularly of the members of the Society. It was founded in 1825. Murray Hall, erected in 1879 from a bequest left for the purposes of the Society by Hamilton Murray, of the class of 1872, contains an auditorium for public worship and a room devoted to the "Princeton Work in Peking", containing many Chinese curios and a library of missionary literature. Dodge Hall, connected with Murray Hall by an ambulatory, is the gift of the late

William E. Dodge, and his son, Cleveland H. Dodge, Esq., of the class of 1879, in memory of the late W. Earl Dodge, of the same class. It contains four rooms for the religious meetings of the four classes, a handsomely furnished reading room containing current periodicals, committee rooms, and the apartments of the Secretary. The privileges of this building are extended to all the students of the University irrespective of their relation to the Philadelphian Society.

Helpful addresses are given in Murray Hall every Thursday evening, by members of the Faculty and by outside speakers of note, and each class conducts its own devotional service held on Sunday evenings in the class-rooms. Fifty Bible study groups and eight Mission study classes are conducted by ninety student leaders and several professors. Several of these groups, numbering over one hundred students, are engaged in religious and philanthropic work in Princeton and vicinity. The Princeton Town Club, under the Society's auspices, numbers one hundred and fifty men and boys, and the Society owns and conducts a Summer Camp on Barnegat Bay throughout the summer, where city boys, thirty or forty of whom are received for two weeks at a time, are brought into helpful relations with the Princeton students. The Society and its friends man and finance the "Princeton Work in Peking," established in 1906 as the "Peking Y. M. C. A." Four Princeton graduates conduct work for the young men of Peking, the Chinese students and the Foreign Legation guards.

The St. Paul's Society

The St. Paul's Society, a religious organization composed of those of the undergraduates of the University who are members of the Protestant Episcopal Church, was founded in 1875. To its care is intrusted a number of mission chapels wherein members of the Society, lay readers

licensed by the Bishop of New Jersey, conduct services every Sunday. Under its auspices a course of sermons is delivered annually in Trinity Church. Meetings are held in an attractive room provided for the use of the Society by Trinity Parish, in the Potter Memorial House, situated on Mercer street, adjoining Trinity Church. The annual election of officers is held on the fourth Wednesday of April.

ATHLETIC GROUNDS AND BUILDINGS

The University Field

This field, which is large enough for two football games to be played simultaneously, is the scene of all University athletic contests and games held in Princeton. The entrance gateway at the foot of William Street is the gift of Ferris S. Thompson, Esq., of the class of '88, who has also donated the handsome wall and gateway on Prospect Avenue, built in 1911 from designs by Messrs. McKim, Mead, and White. Besides the baseball ground and football field, there are a 220-yard straightaway and a quarter-mile cinder track and the following buildings: (1) The University Athletic Clubhouse, the gift of Professor Henry F. Osborn, class of 1877, containing training quarters, dining-room, parlor, bedrooms, baths, etc., and a trophy room, which is open to visitors. (2) The Cage for indoor winter practice, a well-lighted brick structure with a clear floor space of 60 x 140 feet. (3) The Field House, containing dressing-rooms, lockers, and baths for the University and visiting teams. (4) The Grand Stand, the gift of Mrs. John J. McCook, of New York; the clock in the peak of the roof being the gift of the Glee Club of 1890. (5) The Open Stands, built by alumni subscriptions.

The Brokaw Field and Memorial Building

The Brokaw Field was provided by the alumni for the benefit of undergraduates who are not members of the University teams. It contains three baseball diamonds and a field for "soccer" and Rugby football. To the east and closely adjoining, a new field has been laid out, large enough to accommodate two baseball diamonds and a football field. Two terraces have been made on which are eighteen tennis

courts. On another terrace are three tennis courts and two basketball courts, and above them is the Brokaw Memorial Gateway and Building, erected in 1892 by I. V. Brokaw, Esq., of New York, in memory of his son, Frederick Brokaw, of the class of 1892, who lost his life at Elberon, N. J., in 1891, while attempting to rescue a drowning girl. A wing of this building contains a concrete swimming pool lined with white tile, 100 feet long by 25 feet wide, which is architectually combined with the Gymnasium. The Brokaw Building also contains three hand-ball courts.

The Gymnasium

The Gymnasium, erected by the alumni, is situated toward the southwest end of the campus. In style of architecture this building conforms to the academic Gothic of Blair, Little, and Patton Halls, and the material used is the same Germantown stone. These four buildings, harmonizing in style and general effect, form an almost unbroken western boundary to the campus, nearly half of a mile in length.

The façade of the Gymnasium comprises two full stories and a tower. The main entrance opens into a trophy hall 50 feet wide by 130 feet long, paneled in English oak and with an exposed-beam roof. This hall affords space for a large number of athletic trophies, offices for the members of the Department of Hygiene and Physical Education, a physical examination room, and rooms for fencing, boxing and wrestling. The hall is surrounded by a gallery which is used for trophies and banners.

The Gymnasium proper is entered through the trophy hall. It is 166 feet long and 101 feet wide, and is almost as high as the two-story portion of the building. Its roof is supported only by the side walls, so that the interior is unobstructed. About its walls is an elevated running-track, twelve laps to the mile. It contains, besides the main hall

which is equipped with apparatus for physical training and competitive games, locker and dressing rooms, lavatories, hot and cold shower baths, and a rowing room equipped with sixteen machines for crew practice. The gymnasium is open daily throughout the University year for work by classes, teams or individuals.

Class of 1886 Memorial Building

This building, presented to the University by the Class of 1886, overlooks the Princeton golf course and commands an extensive view of the adjacent country.

The building contains ample provision in the way of bath and locker rooms, reception rooms, etc., designed for the use of members of the Princeton Golf Club, with dormitory and kitchen facilities, to be devoted to the use of the members of the Class of 1886.

The Princeton Golf Club

Students of the University are eligible to membership in the Princeton Golf Club, whose eighteen-hole golf course covers 225 acres and is situated on University property.

THE PRINCETON UNIVERSITY PRESS

The building of the Princeton University Press, erected and equipped by Charles Scribner, Esq., of the Class of 1875, was completed in 1911. It is located on William Street, between the campus and University Field. The building is Collegiate Gothic in style, and is planned in the form of the letter H, with a large court which is separated from the street by a battlemented wall. It was designed by Mr. Ernest Flagg, of New York. The material is the local Princeton stone, such as was used in Holder Hall.

The Princeton University Press has been organized under the act providing for "associations not for pecuniary

profit," and its objects, as set forth in its charter, are "in the interest of Princeton University to maintain and operate a printing and publishing plant for the promotion of education and scholarship, and to serve the University by manufacturing and distributing its publications."

THE PRINCETON UNIVERSITY STORE

The Princeton University Store is a coöperative association, membership in which is open to all students and other members of the University upon the deposit of a small fee. The store deals in text books used in the University, stationery, athletic goods, Princeton souvenirs, confectionery, etc. The members of the store have the privilege of purchasing at a discount from the regular retail price and in addition receive a yearly dividend based on the total amount of their purchases.

PART VIII

EXPENSES, ALLOTMENT OF ROOMS, UNIVERSITY DINING HALLS, UNIVERSITY BILLS, PRIZES, REMISSION OF TUITION, SCHOLARSHIPS, AND CHARITABLE FUNDS

EXPENSES

* Board, 36 weeks.....$3.00 to $8.00 per week.
Washing, 36 weeks.....60 cents per week.
Tuition and Public Room fee.....$160.00 per annum.
Laboratory fee, extra for each chemical course involving laboratory work.....$5.00 per annum.
Laboratory fee, extra for the courses Physics 101, 102; Physics 201, 202.....$5.00 per annum.
Apparatus Deposits (see below).....
Room rent in dormitories (according to location of room).....$18.00 to $175.00 per annum.
Heat, fixed charge (according to location of room).....$10.00 to $28.00 per annum.
Light, fixed charge (according to location of room).....$12.00 to $28.00 per annum.
Infirmary fee.....$7.00 per annum.
Department of Physical Education fee.....$7.00 per annum.
Examination fee, payable at time of taking entrance examinations.....$5.00
Graduation fee, payable second term, Senior year.....$12.00

Apparatus Deposits.—Students pursuing laboratory courses are required to make deposits to pay for apparatus injured or destroyed. At the end of the term any excess in favor of the student is placed to his credit on the bill for the next term. The deposits in the courses are: General Physics—$5; Chemistry—Sophomores and Juniors, $10; Seniors, $15. In Geodesy—Freshmen, second term, $10;

* Freshmen and Sophomores are required to board at the University Dining Halls. The rate of board for the present year is $5.50 per week, but reductions are made in the cases of students who are unable to pay the full price, in return for services performed in the administration of the Dining Halls. The amount of the reduction varies, but is frequently as much as $2.50 per week, making the minimum charge for board $3.00. It may be found necessary to increase the rate of board to $6.00 per week for the year 1913-1914.

Sophomores, second term, $15; Juniors, both terms, $10; Seniors, first term, $5.

Students taking any of the courses in Graphics will require a drafting outfit costing from $18 to $25.

ESTIMATE OF ANNUAL EXPENSES

Undergraduate Department

Average minimum, medium, and maximum estimates of the necessary expenses for one year of a student occupying an unfurnished room in a dormitory have been prepared as follows:

	Min.	*Medium*	*Max.*
* Board, 36 weeks, at $3.00 to $8.00.....	$108.00	$180.00	$288.00
Washing, 36 weeks, at 60 cents per week	21.60	21.60	21.60
Tuition and Public Room fees.....	160.00	160.00	160.00
Infirmary fee.....	7.00	7.00	7.00
Department of Physical Education fee...	7.00	7.00	7.00
Room rent.....	30.00	90.00	200.00
Heat (per room).....	10.00	19.00	28.00
Light (per room).....	12.00	20.00	28.00

Laboratory fees for courses in Chemistry and Physics, apparatus deposits, books, Hall dues, clothes, furnishings for rooms, incidentals, and traveling and vacation expenses have not been included in these estimates.

* Freshmen and Sophomores are required to board at the University Dining Halls. The rate of Board for the present year is $5.50 per week, but reductions are made in the cases of students who are unable to pay the full price, in return for services performed in the administration of the Dining Halls. The amount of the reduction varies but is frequently as much as $2.50 per week, making the minimum charge for board $3.00. It may be found necessary to increase the rate of board to $6.00 per week for the year 1913-1914.

RULES GOVERNING THE ALLOTMENT AND RENTAL OF ROOMS

1. Rooms will be assigned members of the University for occupation during the following academic year between the 15th of May and the 1st of June of each year.

2. This assignment will embrace:

a. All rooms occupied by students whose connection with the University will terminate at the end of the academic year.

b. The rooms of all Seniors, whether with room-mate or not (unless the room may be retained by a graduate or for a brother, as elsewhere provided in the rules).

c. All rooms for which the lease has not been properly renewed.

3. An allotment may also take place at the close of the first term of each academic year for the purpose of assigning such rooms as may then fall vacant.

4. *a.* The assignment of rooms will in all cases not herein specially excepted take place in such a manner that specific rooms shall be assigned by lot.

b. The rooms to be assigned are classified according to the amount of their rental, without heat and light, in eight groups as follows:

(1) The first group embraces rooms whose rental is from $18 to $36, inclusive. There are 78 single rooms in this group.

(2) The second group embraces rooms whose rental is from $40 to $66, inclusive. There are 85 single rooms in this group.

(3) The third group embraces rooms whose rental is

from $70 to $100, inclusive. There are 129 single rooms and 18 double rooms in this group.

(4) The fourth group embraces rooms whose rental is from $105 to $140, inclusive. There are 58 single rooms and 12 double rooms in this group.

(5) The fifth group embraces rooms whose rental is from $150 to $180, inclusive. There are 57 single rooms and 34 double rooms in this group.

(6) The sixth group embraces rooms whose rental is from $200 to $240, inclusive. There are 19 single rooms and 103 double rooms in this group.

(7) The seventh group embraces rooms whose rental is from $250 to $300, inclusive. There are 220 double rooms and one single room in this group.

(8) The eighth group embraces rooms whose rental is over $300. There are 25 double rooms in this group.

c. The applicants for rooms will be divided into corresponding groups, each applicant being required to inform the Treasurer in writing before the 10th of May, or the 20th of January, as the case may be, both of his intention to enter the drawing and of the group in which he wishes to be placed.

Every applicant for a room shall agree beforehand, and shall be required, to take the room which may be assigned to him by lot in the group in which he has made application.

d. Each drawing will begin with the first group and proceed from that group through the other groups successively in the order given above. Any applicant who does not obtain a room in the group to which he first asked to be assigned may be allowed to draw in the next higher group.

e. If there be any rooms remaining unassigned after a drawing, such rooms may be assigned by subsequent allotment, at such time before the end of the year or of the term as the Treasurer may appoint; such supplementary allot-

ment to be made under the same rules as the principal allotment, with this exception, that the rooms disposed of by means of it may be classified as above or not, at the discretion of the Treasurer.

f (*a*). Priority in the drawing will be determined by the length of time the applicants have been members of the University. The first drawing will include the names of all applicants who have been members of the University for more than one year. A second drawing will include the names of all applicants who have been members of the University one year or less.

f (*b*). If the application for a double room is signed by students who have been members of the University different lengths of time, it will be classified and placed in the drawing in which the student who has been a member of the University the shortest length of time would be placed.

g (*a*). On or before the 5th day of May there will be drawn by lot from all single and double rooms available for occupancy in the fall, accommodations for 150 entering Freshmen, equitably distributed among the several groups according to rental.

g (*b*). The Registrar of the University will send to all candidates for admission to the Freshman Class, who have been admitted at the June examinations, a statement of the location and number of rooms reserved throughout the dormitories for the use of Freshmen, together with the rental to be charged in each case, and a statement of the owner's valuation of the furniture which may have been left in any of the rooms. The student to whom a room may be allotted is under no obligation to purchase furniture which may have been allowed to remain in the rooms as the property of the former occupant. Accompanying this statement will be a form of application blank which may be filed with the Treasurer at any time prior to July 15th, upon which the entering

student may indicate in what group he desires to draw for a room and whether, in the event of his failure to draw a room in the group first chosen, he is willing to enter his application in the next higher group.

h. Double rooms are separately classified and allotted in accordance with the above regulations. Only such suites as consist of a study and two bedrooms are considered double rooms within the meaning of this clause. No double room can be assigned to a single individual, nor is it within the privilege of any single individual to draw for a double room. Every application for a double room must give the names of two persons who intend to occupy the room together and who undertake to be jointly responsible for the rent of the same.

i. Whenever for any reason one of the occupants of a double room is permitted or obliged to cancel his room lease, the remaining occupant must vacate the room at the end of the current academic term, unless he agrees to pay the whole rent, or provide a room-mate who shall join him in signing a new lease for the remainder of the academic year.

5. *a.* The tenure and liabilities of those to whom rooms are assigned under these rules shall be the tenure and liabilities expressed in the following lease, which must be signed in the case of each room allotted by the student who is to occupy it, and by his parent or guardian. This lease must be signed and delivered to the Treasurer in each case within ten days of the allotment, except in the case of new students, provided for under Rule 4g.

"This agreement, made the day of , 191 , between the Trustees of Princeton University and of , witnesseth, that the said Trustees of Princeton University do hereby lease unto the said Room No. in the Entry of , to hold for the academic year of , paying therefor during the said term unto the said Trustees of Princeton Uni-

versity the yearly rent of $ in two equal payments, to be made the one within the first four weeks of the first term of the academic year, the other within the first four weeks of the second term of the academic year.

"And the said covenants to pay the said rent in the manner and at the times aforesaid, and to deliver up the said premises to the said Trustees of Princeton University or its legal representative at the end of said term in as good condition as the same are or may be put into by the said Trustees of Princeton University, reasonable use and wear and tear thereof, and fire and other casualty excepted. The said lessee also covenants that he will not do or suffer to be done any damage in the leased premises, and that, if any damage beyond reasonable wear and tear be done, he will cause the same to be made good as soon as possible at his own expense, employing for that purpose the proper University workmen, and paying the cost thereof at once to the University Treasurer, it being understood that the damage here meant includes the breakage of glass and locks, whether by accident or design. The said lessee further covenants that he will not sublet the same or any part thereof, nor permit any other person or persons to occupy the same or any part thereof, nor make nor suffer to be made any alteration therein without the consent of the said Trustees of Princeton University for that purpose in writing first had and obtained. And the said lessee further covenants that the said Trustees of Princeton University through their authorized representative may enter the said premises for the purpose of viewing or making improvements therein at any reasonable times in the daytime, or at any other time for the legitimate purposes of University discipline. This lease is made on the express condition that it may be terminated by said Trustees through their representative."

b. Any occupant of a college room may retain his room until the end of his undergraduate or graduate course, provided he annually notify the Treasurer of his intention of retaining it and sign a new lease before the 1st of May; otherwise his room will be considered vacant and will be included in the next allotment. In case an occupant of a double room be left without a room-mate at the end of the academic year, he may renew his lease upon condition of naming another student of the University who will become

joint lessee with him for the following year, unless the roommate who leaves is a Senior or a fourth year special. It will also be the privilege of any occupant of a college room to renew his lease at the end of his own tenure in the name of his brother, when that brother is to enter the University immediately.

c. The right to occupy a room is not transferable and terminates with the expiration of the lease. Any attempt on the part of the occupant of a college room to sell or transfer, directly or indirectly, his right of occupancy will be deemed a fradulent transaction. The penalty for violating this rule will be forfeiture of the rooms by the new lessee.

d. The occupant of a college room shall deposit with the Secretary of Business Administration the sum of 25 cents for each key to his room that may be furnished him by the University; and all amounts paid under this clause will be refunded upon return of the key or keys furnished.

6. *a.* The seller and buyer of furniture in rooms allotted to students now in college will be required to file in the office of the Secretary of Business Administration, on or before June 15th, a statement signed by each of the students concerned and by their parents or guardians, to the effect that they have agreed upon a mutually satisfactory price for such of the furniture as the buyer is willing to purchase. In the absence of such an agreement being filed on or before June 15th, the owner of the furniture will be notified to remove it immediately. If this notice is not complied with, the furniture will be sold by the University authorities.

b. If any of the rooms drawn and held in reserve for the next incoming Freshman Class contain furniture, the owner of the furniture will be informed that it must be removed not later than the day in September when the dormitories are opened for occupancy; unless the Fresh-

man to whom it is allotted shall elect to purchase it at the price fixed by the owner.

7. No exchange of rooms will be allowed unless formally sanctioned in writing by the Treasurer; and then only upon terms explicitly stated in a written application signed by both parties to the proposed exchange, and not in contravention of the spirit of these rules. Such applications will be kept on file in the Treasurer's office.

8. When rooms are vacated during a term the rent must be paid until the end of the term. An occupant of a college room who expects to be absent on leave for a term may be released from the obligations of his lease, provided he notify the Treasurer before the beginning of the term during which he expects to be absent, and give up the room; but no abatement or drawback of room rent will be allowed for any period less than a term, except in special cases to be stated in writing, and by permission of the Treasurer.

The Faculty of the University is directed to suspend or expel every student that may be found guilty of breaking or evading these rules or of injuring or interfering with the person or property of his successor in a room; or of aiding or abetting another in such transgression, evasion, injury, or interference. The Faculty and all its officers are instructed to take the utmost pains, by ordinary or extraordinary means, to discover such offenders and prevent such offences.

The Faculty is further instructed to report, with the evidence discovered, the name of any graduate or outsider that may be guilty of such offences to the Committee on Grounds and Buildings; and said Committee is authorized and directed to procure legal counsel and when the evidence seems to justify it to take appropriate legal proceedings against any and every offender before a court of law.

THE UNIVERSITY DINING HALLS

Freshmen and Sophomores are required to take their meals at the University Dining Halls. Juniors and Seniors who belong to upperclass clubs eat at those clubs, while non-club men either eat at the Dining Halls or make private arrangements. About ten dining rooms are assigned to Freshmen, and a sufficient number to Sophomores. Three are assigned to upperclassmen. Students are encouraged to eat in any dining room assigned to their class in which they happen at any particular meal to find congenial friends. In addition to dining rooms there are Commons Rooms or lounging rooms.

The Dining Halls are subject to constant sanitary inspection. The kitchen is fitted with all the best appliances for cooking and serving on a large scale, and adjoining are a bakery, an ice cream plant, and a milk sterilizing plant. The Halls are in charge of a salaried Manager who reports directly to the Secretary of Business Administration. The Manager is assisted by a Dining Halls Committee of fourteen undergraduates, who handle all matters concerning membership, rebates, etc. The object of the Dining Halls is to provide wholesome and abundant food at the cheapest rate compatible with proper service, and amid hygienic and attractive surroundings. The fact that non-club upperclassmen are preferring to eat at the Halls rather than make their own arrangements is believed to indicate that the board provided is better than can be obtained elsewhere. The price per week this year (1912-1913) is $5.50, but it may be found necessary to increase the price to $6.00 per week for the year 1913-1914. In return for services performed in the administration of the Halls reductions are allowed to stu-

dents unable to pay the regular price. The amount of the reduction varies, but it is frequently as much as $2.50 per week. Students needing a reduction in the charge for board should communicate with the Secretary of the University.

UNIVERSITY BILLS

All University expenses, including board, must be paid in advance to the Treasurer of the University.

Juniors and Seniors may take their meals at any house approved by the Secretary of Business Administration; Freshmen and Sophomores are required to board at the University Dining Halls.

Students are required to call at the Treasurer's office in the course of the first ten days of each term, and to give information as to their place of boarding, etc., so that their bills can be made out. All bills must be paid within the first four weeks of the term. Failure to comply with this rule will deprive the student of the privileges of the University until payment is made, unless excused by special vote of the Faculty.

When a student enters the University before the middle of the term, he shall pay in full the usual charges for that term, with the exception of the charges for board; if he enter after the middle of the term, he shall pay one-half. For board he shall pay in proportion to the time.

When a student leaves the University, whether voluntarily or by dismissal, before the middle of any term, one-half of the charges for tuition and public rooms for that term will be refunded. But in the case of temporary absence and subsequent return, although the absence be for more than half a term, no such rebate will be granted.

When a student is dismissed from the University for any cause, the advance deposit for board, heat, and light, beyond the time of dismissal, will be refunded to his parent or guardian.

When at the end of the first term the amount of the advance deposit proves to be in excess of the sum required to defray the board or room bills of any student, the excess will be credited on his bill for the next term. At the end of the academic year the amounts overpaid by the members of the *graduating class* for board, room rent, heat, and light will be refunded by the Treasurer to the student's parent or guardian. The parent or guardian of *every undergraduate* will be advised of the amount of excess to the credit of his son or ward, and such amount will be *carried over to his credit on the bill of the first term of the following year.* In case of the withdrawal or dismissal from the University of any undergraduate at the end of the college year, such excess will be refunded by the Treasurer to the parent or guardian, when informed by the Clerk of the Faculty that such undergraduate has been withdrawn or dismissed from the University.

PRIZES

Alexander Guthrie McCosh Prize

The interest of $1,500 will be given annually to that member of the Senior class who shall write the best essay in philosophy, including psychology, logic, metaphysics, and the history of philosophy. Anyone of the following subjects may be chosen: "The Philosophical Doctrine of Natural Rights"; "The Relation of Philosophy to Poetry"; "The Free-Will Controversy". The essay must be presented on or before March 15.

Lynde Debate Prizes

Three prizes—the income of $5,000, contributed by Charles R. Lynde, Esq.,—will be awarded by a committee, appointed by the Faculty, to the three successful competitors in a debate held immediately prior to the trials for the appointment of intercollegiate debaters. The debaters are six in number, three from each of the Literary Societies, and are selected by committees appointed by the Societies respectively from their own members in the Faculty.

Baird Prizes

Through the liberality of Charles O. Baird, Esq., the following prizes, representing the income of $6,000, will be given to those who excel in the oratorical exercises of the Senior class, viz.: The Baird Prize of $100 to the best speaker of those who have ranked among the first six writers in any two of the three subjects of English literature, rhetoric, and oratory; a prize for oratory of $50 to the best speaker, exclusive of the Baird Prizeman, of those who, in

the same departments, have ranked among the first twelve writers; a prize for delivery of $30 to the best speaker exclusive of the two just mentioned; also, a prize for poetry of $50; and two prizes of $40 and $30, respectively, for the best and second best written disputations.

Class of 1859 Prize

The interest of $2,000, given by the Class of 1859, will be awarded to that member of the Senior class who shall write the best essay on Nathaniel Hawthorne, and pass the best examination on The Brook-Farm Movement. The essay must be handed in on or before May 31, and the examination will be held in June. The subject of the essay for the Class of 1914 will be William Hazlett, Essayist.

George Potts Bible Prizes

The yearly interest of $1,000, given in 1867 by Mrs. Sarah A. Brown, expended in the purchase of two copies of Matthew Henry's Commentary on the Bible, will be presented to the best two Biblical scholars of the Senior class at the end of their course.

Lyman H. Atwater Prize in Political Science

This prize, being the annual interest on the sum of $1,000, contributed by the Class of 1883, was instituted as a memorial of the Rev. Lyman H. Atwater, D.D., LL.D., Professor of Political Science. It will be given to that member of the Senior class who shall have passed the best examination and written the best thesis on some subject in political science, to be assigned by the professors in charge of Jurisprudence and Politics.

The thesis must be ready June 1; the examination will be held on that day. The subject for the thesis in 1913 and the basis on which the examination is to be set will be:

"Would it be wise to allow our State executives to propose measures to the Legislature and discuss them on the floor, as is customary in Switzerland?"

Frederick Barnard White Prize in Architecture

The late Mrs. Norman White established in memory of her son, Frederick Barnard White, of the Class of 1883, a prize in architecture, yielding $40. The prize is open to the entire Junior and Senior classes and to special students who take a full schedule of studies. The subject of the essay for this year is: "The Development of the Buttress in Mediaeval Architecture." The subject of the examination is: "Romanesque and Gothic Architecture." The essay should be presented before June 1.

Class of 1869 Prize in Ethics

The annual interest of $3,000, given by the Class of 1869, will be awarded to that member of the Senior class who shall pass the best examination in ethics and write the best essay. The essay to be presented on or before June 1. The subject of the essay for the Class of 1913 will be: "The Kantian Postulates of Morality."

C. O. Joline Prize in American Political History

The sum of $50 will be awarded annually at Commencement to that member of the graduating class who shall haye maintained a creditable standing in the subject of American history, and who shall have submitted the best written dissertation upon "The History of the Origin and Adjustment of the Oregon Question."

The dissertation must be at least 5,000 words in length and must be accompanied by a bibliography of the subject. Specific references to the sources used must be given throughout.

The prize shall be awarded by the professor or professors in charge of the Department of American History.

New York Herald Prize

The yearly interest of $1,000, presented by James Gordon Bennett, Esq., will be given to that member of the Senior class, or to the special student of satisfactory standing, who shall have taken for both terms of Senior year at least two of the courses given by the Department of History, Politics, and Economics, and at least one course in English literature for both terms, and who shall have presented the best thesis in English prose upon some subject of contemporaneous interest in the domestic or foreign policy of the United States Government. The thesis must be ready by June 1. The subject for the thesis in 1913 will be: "Is it or is it not to the advantage of the United States of America to have territories in other parts of the world?"

Class of 1876 Memorial Prize for Debate in Political Science

This prize is to be given annually by the Class of 1876 to the successful contestant in a debate on a subject of current interest in American politics, to be held on Washington's Birthday, said prize to be the interest of $2,000. The competitors, four in number, one from each class, are to be chosen by a vote of their respective classes.

Philo Sherman Bennett Prize in Political Science

The interest on the sum of four hundred dollars, the gift of the late Philo Sherman Bennett, of New Haven, Connecticut, to be bestowed on that member of the Senior or Junior class of the University who shall write the best essay discussing the principles of free government. The

essay must be in the hands of the Professor of Politics by the first of June.

Spencer Trask Debating Fund

The interest of $3,000, given by the late Spencer Trask, of the Class of 1866, is used to promote debating. At present one-third of the interest is awarded to the best debater in the trials for the intercollegiate debate with Yale; one-third to the best debater in the trials for the intercollegiate debate with Harvard; and one-third for general debating expenses.

The Choate Prizes

The Board of Trustees at its meeting in June, 1912, accepted from the Honorable Joseph H. Choate a gift to the University of $500; being the honorarium which he had received for the Stafford Little Lectures. He desires this money to be divided into two prizes of $250 each, to be given to the undergraduates for competition.

One prize for the best essay on the proposition: "The independence of the judiciary is essential to the safety of the state and of all its citizens."

One prize for the best essay on the question: "Is it advisable to change the length of the Presidential term, making the incumbent ineligible for re-election after a single term?"

The essays should be at least 5000 words in length, be legibly written or typewritten, contain a bibliography of materials and sources used, be signed with an assumed name (which should be written also on a sealed envelope in which the real name is given) and must be in the hands of the Registrar by May 1, 1913.

Prize in American History, established by The Society of Colonial Wars in the State of New Jersey.

The sum of $50 will be awarded every alternate year, beginning with the year 1912-13, to that undergraduate of Princeton University who shall have submitted the best written dissertation upon some subject of American Colonial History assigned by the Department of American History.

The dissertation must be at least 5000 words in length, and must be accompanied by a bibliography of the sources used. Specific reference to the sources must be given throughout.

Dissertations in competition must be in the hands of the Registrar before May first and must be submitted anonymously. The names of the authors should be inclosed in sealed envelopes and attached to the dissertations.

The prize shall be awarded by the Professor or Professors in charge of the Department of American History, and the decision shall be announced at Commencement.

The subject for the year 1912-1913 is, "Slavery in the Colony of New Jersey."

Wood Legacy

The sum of $150, the income of a legacy of Dr. George B. Wood, will be awarded to that member of the Junior class who shall stand highest for the Junior year.

Junior Orator Medals and Maclean Prize

Four gold medals, or books of equal value, will be awarded by a committee, appointed by the Board of Trustees, to the four successful competitors in an oratorical contest during Commencement week. The competitors are eight members of the Junior class—four from the Cliosophic and four from the American Whig Societies—selected by committees appointed by the Societies respectively from their own members in the Faculty.

The Maclean Prize, founded by the will of the late Henry A. Stinnecke, consisting of the sum of $100, will be given to that one of the orators chosen by the Literary Societies from the Junior class who shall during Commencement week pronounce the best English oration.

The committee of judges will be composed of a professor of English and two graduates of the University not members of the Faculty.

Dickinson Prize

The Dickinson Prize, founded in 1782 by the Hon. John Dickinson, of New Jersey, Governor of Pennsylvania and Delaware, consisting of a medal of the value of $60 (or its equivalent in money), will be awarded to that member of the Junior class who shall write the best dissertation upon a theme in logic. Either of the two following subjects may be chosen: "The Logical Theory of the Judgment"; "The Criterion of Truth". The dissertation must be presented on or before May 24.

Class of 1870 Junior English Prizes

Of the yearly interest of $1,500, one-half will be given to the best Old English scholar, and one-half to the best English literature scholar of the Junior Academic class.

Thomas B. Wanamaker English Language Prize

This prize, the yearly interest of $1,000, will be given to that member of the Junior Academic class who shall pass the best examination in English philology (Course 303), and write the best thesis on some assigned topic therein.

Mary Cunningham Humphreys Junior German Prizes

Two prizes, of $25 and $15 respectively, established by the late Professor Willard Humphreys, in memory of his mother, Mary Cunningham Humphreys, will be awarded to those members of the Junior class who, having taken

the regular German course for at least two years (all the courses in the Germanic Section of the Modern Language Department in Junior year and either Courses 105, 106 or 203, 204) shall, at the close of the second term, pass the best examinations on the work of the term.

The R. Percy Alden Memorial Prize.

The income of $1,000, given by Mr. John P. C. Alden of the Class of 1907, will be awarded annually to that member of the Junior French course who shall write the best essay on some subject relating to French memoires. The essays must be presented on or before May 15.

Class of 1883 Prizes for English in the School of Science

Class of 1883 English Prize for Juniors in B.S. and Litt. B. Courses.—This prize, the annual interest of $1,000, will be given to that member of the Junior class, a candidate for the degree of B.S. or Litt.B., who shall have done the best work in the English studies of the year (Old English excepted) and submitted the best essay on a subject in English literature assigned by the English Department.

Class of 1883 English Prize for Freshmen in Civil Engineering Course.—This prize, the annual interest of $1,000, will be given to that member of the Freshman class, in the civil engineering course, who shall have done the best work in the English studies of the year, and shall have submitted the best essay on a subject assigned by the English Department.

Stinnecke Prize

The Stinnecke Foundation was established in 1870 by the will of the late Henry A. Stinnecke, of the class of 1861, and was supplemented by a bequest received in 1876 from

his aunt, Miss Maria Stinnecke. The income is divided between the Stinnecke Scholarship of $500 and the Maclean Prize of $100.

The Stinnecke Scholarship, of the annual value of $500, tenable during the undergraduate course, unless forfeited by neglect of study, is given every third year "to that person who, having entered the Sophomore class, passes the best examination at the opening of the session in September, in the Odes of Horace, the Eclogues of Virgil, and the Latin Grammar and Prosody, as well as the Anabasis or Cyropædia of Xenophon and the Greek Grammar." Students of the University who have been members of the Freshman class, as well as new students entering the Sophomore class, will be admitted to such examination. The committee of examiners is appointed by the Board of Trustees. The next competition for this scholarship will be held in the autumn of 1914.

Class of 1861 Prize

The interest of $1,200, given by the Class of 1861, will be awarded to the member of the Sophomore class who shall pass the best examination at the end of the year on the honors mathematics of the Sophomore year.

Francis Biddle Sophomore Essay Prize

This prize, the yearly interest of $500, will be given to that member of the Sophomore class who shall write the best English essay of the year.

Class of 1870 Sophomore English Prize

This prize, the yearly interest of $1,000, will be given to that member of the Sophomore Academic class who shall pass the best examination on the English studies of the year.

ORANGE ALUMNI ASSOCIATION PRIZE SCHOLARSHIP

This scholarship, which pays the holder $200 per annum, the income from $4,000 given by the Princeton Alumni Association of the Oranges, will be awarded in accordance with the following conditions:

I. Only those are eligible to compete for this scholarship whose parents or family shall at the time of the competition have been resident for at least one year in the district of the Princeton Alumni Association of the Oranges, and who themselves are in residence at Princeton as regular members of the Freshman class in a course leading to a Bachelor's degree.

II. For those eligible to compete for this scholarship a special examination shall be arranged as early in the first term as may be convenient, the material of which shall be selected from the subjects required for entrance. The Faculty shall name as winner of the scholarship that student who stands highest in this examination, and as alternate the student who stands next highest. This alternate may become the holder of the scholarship in case of the death or removal of the winner.

III. The scholarship shall be retained by its winner during his Freshman and Sophomore years, provided that in his studies he maintains a rank not below the second general group and that he does not come under serious discipline for misconduct.

The last competition for this scholarship was held in the autumn of 1911. The next competition will be in the autumn of 1913.

REMISSION OF TUITION

Candidates for the degree of Bachelor of Arts, Bachelor of Letters, or Bachelor of Science of insufficient means and of more than ordinary intellectual ability may apply for remission of a part of the charge for tuition. Applicants who present satisfactory testimonials as to scholarship and character and proof that the assistance is absolutely needed will be granted remission of fifty dollars a term from the charge for tuition on admission to the University. This remission is in the form of a loan, and all who receive it are required to sign a non-interest-bearing note, to be held by the University, which the signer holds himself morally bound to pay at the earliest date practicable.

Remission of tuition is granted in all cases for one term and subject to the following conditions:

I. The student must be regular in attendance at his college exercises and free from serious discipline.

II. His college standing, as shown by his latest semi-annual report, must not be below the third general group.

III. His college bill for one term for board, room rent, light, and heat must not exceed one hundred and fifty dollars.

An applicant who has fulfilled these conditions during the first term of a college year will be granted remission of fifty dollars from the charge for tuition for the second term of that year without further action on his part.

In accepting remission of tuition it is understood that a student agrees to devote his time and energies to his studies, and if his work shall appear to suffer by reason of participation in extra-curriculum activities, or if his scale of living

shall seem to be out of proportion to his means, he shall forfeit the remission of tuition even though he shall have complied technically with the rules.

For application blanks and further information apply to the Secretary of the University, Princeton, New Jersey.

SCHOLARSHIPS

SCHOLARSHIPS FOUNDED BETWEEN 1853 AND 1902
(Income now used for University Scholarships)

In 1853 the Trustees authorized the Faculty to take such measures as might seem to them necessary towards securing a number of scholarships with a principal of one thousand dollars each. Pursuant to this authorization, between 1853 and 1902 sixty-four scholarships with a principal of one thousand dollars each were endowed by John Aitken, E. F. Backus, A. B. Baylis, Charles S. Baylis, James Blair, Isaac V. Brokaw, Mrs. P. Bullard, Hons. Simon and Donald Cameron (1), Aaron Carter, Jonathan Cogswell, D.D., Roswell Colt (3), Stephen Colwell, A. Creswell, Hon. Amzi Dodd (the Bloomfield Scholarship), Aaron Fenton, A friend, A friend (the Henry M. Alexander Scholarship), A friend of President Maclean (the John Maclean Scholarship), Friends of President McCosh (the James McCosh Scholarship), Hon. Henry W. Green, Dudley S. Gregory, Richard T. Haines, Gen. N. Norris Halsted, Albert O. Headley, Dr. Hugh L. Hodge, Capt. Silas Holmes (5), Hon. John P. Jackson, Peter Jacobus, Jacob J. Janeway, D.D., Ladies of the Presbyterian Church of Huntington, N. Y., James Lenox (5), Drs. John and George M. Maclean (1), J. D. McCord, Frederick Marquand, Members of the Class of 1841, Members of the Class of 1856, Members of the First Presbyterian Church of Bridgeton, N. J., Members of the First Presbyterian Church of Peekskill, N. Y., Members of the First Presbyterian Church of Trenton, N. J., Members of the Second Presbyterian Church of Elizabeth, N. J., George W. Musgrave, D.D., Matthew

Newkirk, Dr. Samuel H. Pennington, Hon. Nehemiah Perry, Isaac N. Rankin, Harry E. Richards, M.D., George L. Sampson (the Henry J. van Dyke Scholarship), Joseph R. Skidmore, I. S. Spencer, Alanson Trask, Joseph N. Tuttle, Hon. John Van Vorst, William White, and Chandler Withington, and one scholarship with a principal of one thousand five hundred dollars was endowed by Henry M. Flagler.

During the same period twenty-one memorial scholarships with a principal of one thousand dollars each were endowed as follows:

The Cyrenius Beers Scholarship by Miss Julia Beers, the J. S. Bonsall Scholarship by a bequest of Mrs. Susan R. Bonsall, the Albert Dod Brown Scholarship by Mrs. Susan D. Brown, the Grace Newcombe Denning Scholarship by Mrs. William Moir ($1,500), the Finley and Breese Scholarships by a bequest of Samuel F. B. Morse, the Elizabeth Musgrave Giger Scholarship by Prof. George M. Giger, D.D., the Charles Dickinson Hamill Scholarship by Samuel M. Hamill, D.D., the Matthew B. Hope Scholarship by the Trustees of the College of New Jersey as an acknowledgment of the services of Prof. Hope in raising an endowment of over one hundred thousand dollars, the Jeremiah D. Lalor Scholarship by a friend, the Harvey Lindsley Scholarship by Mrs. Emeline Coney Lindsley, the John C. D. Matthews Scholarship by Mrs. Mary R. Matthews, the Newark Scholarship by the will of Henry Rogers, the Ezra Nye Scholarship by F. Wolcott Jackson, the John Joseph Rankin Scholarship by William Rankin, the Laurance Field Stevens Scholarship by Herbert B. Stevens, the Nathaniel W. Townsend Scholarship by Mrs. Daniel Haines, the William Campbell Truesdell Scholarship by Warren N. Truesdell, the Van Sinderen Scholarship by Mrs. and Miss Van Sinderen, the Robert Voorhees Scholarship by Mrs. Susan V. Clark, and the Gertrude N. Woodhull Scholarship by Dr. John N. Woodhull.

In 1903 the Trustees decided to grant remission of tuition to applicants for scholarships who were candidates for the degree of Bachelor of Arts in accordance with the plan described in the section entitled Remission of Tuition; and to use an amount approximating the income from scholarships founded prior to 1903 for the creation of forty University Scholarships to be awarded in the manner described in the section entitled University Scholarships. In 1909 the privileges of remission of tuition and University Scholarships were extended to candidates for the degrees of Bachelor of Letters and Bachelor of Science.

UNIVERSITY SCHOLARSHIPS

From the income derived from scholarships founded prior to 1903 forty University Scholarships have been established: ten "A" Scholarships of the annual value of one hundred and sixty dollars each, and thirty "B" Scholarships of the annual value of one hundred and thirty dollars each. During the summer these scholarships will be awarded for the first term to members of the Senior, Junior, and Sophomore classes who are candidates for the degree of Bachelor of Arts, Bachelor of Letters, or Bachelor of Science, and who have previously received remission of tuition, in accordance with the following rules:

(*a*) The ten "A" Scholarships will be awarded to those students whose standing during the previous year was in the first general group. If more than ten students are eligible, award will be made according to seniority of class.

(*b*) The thirty "B" Scholarships will be awarded to those students whose standing during the previous year was in the second general group. If more than thirty students are eligible, award will be made according to seniority of class, except that students eligible for "A" Scholarships shall take preference over all others.

University Scholarships are awarded in all cases for one term and subject to the following conditions:

I. The holder must be regular in attendance at his college exercises and free from serious discipline.

II. His general group, as shown by his latest semi-annual report, must not be below that in which he stood when the scholarship was awarded to him.

III. His college bill for one term for board, room rent, light, and heat must not exceed one hundred and fifty dollars.

The holder of a University Scholarship who has fulfilled these conditions during the first term of a college year will receive the scholarship for the second term of that year without further action on his part.

ENDOWED SCHOLARHIPS

The endowed scholarships described in the following list may be assigned to students in any undergraduate department of the University unless restricted by the donor to some particular department or departments. The annual stipend of each scholarship at present is one hundred dollars unless another amount is stated. It is customary to assign these scholarships, when they become vacant, to undergraduates who have been members of the University for at least one year, and who are considered most worthy to receive the benefit.

Application for endowed scholarships should be made to the Secretary of the University, Princeton. New Jersey.

THE ELIZABETH VAN CLEVE SCHOLARSHIP.—Founded in 1886, by a gift of two thousand dollars, from Hon. Caleb S. Green, of Trenton, N. J., of the Class of 1837. In 1912 the principal was increased to two thousand five hundred dollars by William E. Green, Esq., of the Class of 1902. This scholarship is ordinarily assigned to a student in the John C. Green School of Science.

THE WISTAR MORRIS WOOD AND CHARLES MORRIS WOOD SCHOLARSHIP.—Founded in 1887, by a gift of two thousand dollars from Rev. Charles Wood, D.D., of Washington, D. C. In 1908 the principal was increased to two thousand five hundred dollars by the donor.

This fund shall ordinarily in the first instance be given to a member of the Junior Class, or in case no member of the Junior Class answers the conditions, then to any member of the lower classes answering them. Conditions: I. To any foreign missionary's son intending himself to become a foreign missionary; II. To any student proposing to labor in the foreign field; III. To any minister's son studying for the ministry. It shall be understood that the recipient of the fund must possess and keep up superior scholarship.

THE RACHEL LENOX KENNEDY SCHOLARSHIP FUND; with an income of six hundred dollars.—Established in 1888 by Miss Rachel Lenox Kennedy, of New York, with a principal of five thousand dollars and increased by the donor in 1890 by a further gift of ten thousand dollars. The income from this fund is used to aid meritorious undergraduates in any department of the University who have maintained high standing in their classes.

THE BUTLER SCHOLARSHIP; with an income of eighty dollars.—Founded in 1892 by William Allen Butler, Jr., of New York, of the Class of 1876. The original gift was one thousand dollars, to which the founder added five hundred dollars in 1905 and five hundred dollars in 1909.

THE MCCORMICK SCHOLARSHIP; a gift of two thousand dollars.—Founded in 1894 by Mrs. Cyrus Hall McCormick, of Chicago. The annual stipend is eighty dollars.

THE WALLACE SCHOLARSHIPS: (two); with an income of one hundred and twenty-five dollars each.—In 1898 Mrs. R. H. Allen and Miss Wallace, of Newark, N. J., gave five

thousand dollars to found two scholarships in memory of their father, William C. Wallace, of the Class of 1823, for the benefit of needy students.

THE JOHN LINN PATTON SCHOLARSHIP.—Founded in 1903, with a principal of two thousand five hundred dollars, by Mr. and Mrs. William A. Patton, of Philadelphia, in memory of their son, John Linn Patton, of the Class of 1903.

THE MAHLON LONG SCHOLARSHIP.—Founded in 1904 by Rev. George Wells Ely, of Columbia, Lancaster County, Pa., by a gift of one thousand two hundred and fifty dollars and real estate in Minneapolis, Minn., and Jersey City, N. J., valued at eight thousand seven hundred and fifty dollars.

This scholarship is open to undergraduates, members of either the Academic or Scientific Department, and is intended to be given during the entire course to the same student, although appointments or reappointments may be changed by the person having the power, in his discretion. The donor may, during his life, designate the beneficiary, but in case he should not do so on or before October first of each year, then the President of the University shall designate the beneficiary, selecting a regularly matriculated candidate for a degree, who, in his judgment, is a young man of limited means, of worthy character and capacity and who gives promise of a useful life. The net income from this scholarship shall be used by the beneficiary for tuition and other necessary expenses, but no more than four hundred dollars shall be paid to any one beneficiary annually; whatever excess income there may be to accrue to the benefit of the fund.

THE JOHN H. CONVERSE AND JOHN W. CONVERSE SCHOLARSHIPS: (two); with an income of one hundred and

twenty-five dollars each.—Founded in 1904 by the late John H. Converse, with a principal of five thousand dollars. The privileges of these scholarships are to be extended by the Faculty to students looking forward to a seminary course and the Christian Ministry, the Presbyterian Ministry preferred.

THE ROBERT STOCKTON PYNE SCHOLARSHIP.—Founded in 1904, with a principal of two thousand five hundred dollars, by Mrs. Moses Taylor Pyne, of Princeton, in memory of her son, Robert Stockton Pyne.

THE FREDERICK WOLCOTT JACKSON SCHOLARSHIP.—Founded in 1905, by a gift of two thousand five hundred dollars, from Philip N. Jackson, of Newark, N. J., of the Class of 1881.

THE ANDREW WHITE GREEN SCHOLARSHIP; with an income of two hundred and fifty dollars.—Founded in 1905, with a principal of five thousand dollars, by the late Cornelius C. Cuyler, of the Class of 1879, as executor and sole legatee of Andrew White Green. The income to be used in aiding some needy and deserving student each year through his college course; the student to be designated by the President or Dean.

THE HENRY S. GANSEVOORT SCHOLARSHIP.—Founded in 1906, with a principal of two thousand five hundred dollars, by Mrs. Abraham Lansing, of Albany, N. Y., in memory of her brother, Henry G. Gansevoort.

THE CLASS OF 1878 SCHOLARSHIPS.—Dr. John S. Sayre, of the Class of 1878, who died in 1899, made Princeton University his residuary legatee. After creating the Fellowship of Applied Chemistry and the Fellowship of Applied Electricity, the will directs "the balance of my estate, if any,

to be used for as many as possible endowed scholarships in the Academic (Classical) Department of the University which are to be known as the Class of 1878 Scholarships." At present there are six scholarships available under this endowment.

THE GEORGE BLACK REA SCHOLARSHIP; with a principal of two thousand five hundred dollars.—Founded in 1908 by Mr. and Mrs. Samuel Rea, of Bryn Mawr, Pa., in memory of their son, George Black Rea, of the Class of 1904. Preference to be given to a student in the Department of Civil Engineering.

THE ALGERNON BROOKE ROBERTS SCHOLARSHIP, CLASS OF 1896.—Founded with the principal of twenty-five hundred dollars in accordance with a bequest to his mother, 1909.

THE DR. ANDREW J. MCCOSH MEMORIAL SCHOLARSHIPS.—Founded in 1909 with the principal of ten thousand dollars by the late Mrs. Alexander Maitland in memory of her brother, Andrew J. McCosh, M.D., of the Class of 1877. Preference to be given to students in the Senior and Junior classes.

THE JOHN WITHERSPOON SCHOLARSHIP; with an income of one hundred and sixty dollars.—Founded in 1909 by the Trustees of the Witherspoon Memorial Association with a gift of four thousand dollars, the unexpended balance of a fund contributed by patriotic citizens for the purpose of erecting a statue in Washington, D. C., to John Witherspoon.

THE S. STANHOPE ORRIS FUND. Professor S. Stanhope Orris, who died in 1905, bequeathed to Princeton University "the sum of Twenty-five Thousand Dollars ($25,000) as a fund, the annual income of which shall be divided equally among ten needy academic students of good character and

ability, of diligence in study, and exemplary behavior. No candidate for the ministry, however, though needy, studious and possessing ability, shall receive help from this fund unless he pledges himself to continue and do continue the study of Greek regularly to the end of the University Course."

THE "SUSAN BREESE PACKARD MEMORIAL SCHOLARSHIP" AND THE "FRANCIS APPLETON PACKARD MEMORIAL SCHOLARSHIP," founded by a bequest of five thousand dollars under the will of Professor William A. Packard, who died in 1909. "The income of these Scholarships to be devoted to paying the tuition fees of students in Princeton University pursuing courses of study of which the Greek and Latin languages and literature shall constitute a substantial part. Students of approved scholarship and character who need this aid, and such only, shall be eligible to receive the same."

THE THOMAS AND LUCY KAYE MEMORIAL SCHOLARSHIPS.—Founded in 1911 by a bequest of five thousand dollars under the will of John William Kaye of the Class of 1874.

THE WILLIAM ROME GELSTON SCHOLARSHIP.—Founded in 1912 with a gift of $5,000 in memory of William R. Gelston, deceased, of the Class of 1901, "the net annual income thereof to be given in each year to such student in the Academic Department of Princeton University regularly matriculated for a degree, as the President of the University shall consider to be a person of capacity and worthy character, who gives promise of a useful life and is of limited means, such appointee to be designated by said President, and such income shall be used by such appointee, first in the payment of his tuition fees, and the balance shall be used by him in payment of his board and other necessary university expenses".

ENDOWMENT AND ADMINISTRATION OF SCHOLARSHIPS

The following rules for the endowment and administration of scholarships have been adopted by the Trustees:

I. A scholarship available in any undergraduate department may be endowed by the payment to the Treasurer of a sum not less than twenty-five hundred dollars. Unless otherwise specified by the donor the endowment of a scholarship will be invested with the general funds of the University and the incumbent will receive as annual stipend the income of the endowment at the prevailing rate of interest.

II. The right to nominate the incumbent of a scholarship may rest with the donor, if an individual, during his or her lifetime, or if an institution or alumni association, for a period of twenty-five years. At the end of this period or at the death of the donor, the right of nomination shall revert to and rest with the Faculty of the University.

III. All scholarships shall be held subject to such rules as may be adopted from time to time by the Faculty of the University.

FUNDS FOR CANDIDATES FOR THE MINISTRY

THE RICHARDS FUND.—A bequest of Mrs. Esther Richards, of New York, amounting to $2,970.32, for the benefit of candidates for the ministry. Received in 1790.

THE LESLIE FUND.—A bequest of James Leslie of New York, of the class of 1759, amounting to $10,677.49, for "the education of poor and pious youths with a view to the ministry of the Gospel in the Presbyterian Church." Received in 1792.

THE HODGE FUND.—A bequest of Hugh Hodge, of Philadelphia, of a house and lot on Market street, above Second (No. 205), "to be held by the Trustees in trust, to lease out from time to time, and the rents to be applied to the support and education of pious youths for the ministry." Received in 1805.

For application blanks for aid from the funds for candidates for the ministry apply to the Secretary of the University, Princeton, New Jersey.

CHARITABLE FUND

THE VAN ARSDALE FUND.—A bequest of Robert Van Arsdale, of Newark, N. J., of the class of 1826, amounting to $3,000, "in trust for promoting charitable instruction in the College of New Jersey, according to the discretion of the Faculty." Received in 1875.

Applications for aid from the Van Arsdale Fund should be made to Professor Howard McClenahan, Dean of the College.

BUREAU OF STUDENT SELF HELP

The Bureau of Student Self Help has been established under the auspices of the Graduate Council of the University for the purpose of providing opportunities for remunerative employment to students who are obliged to earn all or part of their college expenses. All students who desire to earn money during their college course are advised to register with this Bureau.

Further information may be obtained from Mr. Henry W. Buxton, Secretary of the Bureau of Student Self Help, Princeton University.

PART IX

DEGREES AND HONORS, 1911-1912

DEGREES CONFERRED, 1911-1912

DEGREES IN COURSE, CONFERRED OCTOBER, 1911

PH.D.—*Magna Cum Laude*—Clarence Valentine Boyer, B.S., *Princeton University*, 1902; A.M., *Princeton University*, 1909. Subject, English. Thesis, "The Villain as Hero in Elizabethan Tragedy".

A.M.—Fred Zollicoffer Browne, Ph.B., *University of Mississippi*, 1911
George Hough Bucher, A.B., *Dickinson College*, 1895
Frank Ray Elder, Litt.B., *Princeton University*, 1908
Marshall Gregory Findley, A.B., *Macalester College*, 1907
Nelson Lewis Greene, A.B., *Colgate University*, 1901
Howard Bristol Grose, Ph.B., *Brown University*, 1903
Jesse Herrmann, A.B., *Princeton University*, 1910
Paul Kimball, A.B., *Princeton University*, 1910

LITT.B.—William Walter Bruen, as of the class of 1911

C.E.—Frederick Layton Ackerson, as of the class of 1909
Robert Thiery Roche, as of the class of 1911

DEGREES IN COURSE, CONFERRED JANUARY, 1912

A.M.—Harry Woodin Buck, A.B., *Albright College*, 1908
Herman Stearns Davis, A.B., *Princeton University*, 1892, as of June, 1895

DEGREES IN COURSE, CONFERRED APRIL, 1912

A.M.—Daniel Ivins Messler, A.B., *Princeton University*, 1908

A.B.—William Hayward Macurda, as of the class of 1911
William Mathewson Milliken, as of the class of 1911
William Leonard Nicoll, as of the class of 1911
James Andrew Gregg Pennington, as of the class of 1911
Alphonse Zimmerman, as of the class of 1911

LITT.B.—William Malcolm Laird, as of the class of 1911
James Wilkinson Macartney, as of the class of 1911
Arthur Paul Maher, as of the class of 1911
Joseph Osborne Whiteley, as of the class of 1911
Wayne Everett Connor, as of the class of 1911

B.S.—Russell Cooke, as of the class of 1911

Edward Howland Wardell, as of the class of 1911
C.E.—Harold Sill Bell, as of the class of 1911
Stephen Wood McClave, Jr., as of the class of 1903
Thomas Gillespie Ross, as of the class of 1911

HONORARY DEGREES, CONFERRED MAY, 1912

LL.D.—William Howard Taft
Edward Douglass White

HONORARY DEGREES, CONFERRED JUNE, 1912

A.M.—Charles Henry Butler
D.D.—George Peck Pierson
L.H.D.—William Dean Howells
George Herbert Palmer
LL.D.—Alfred Reed
James Ford Rhodes
John Aikman Stewart

DEGREES IN COURSE, CONFERRED JUNE, 1912

DOCTORS OF PHILOSOPHY (*Ph.D.*)..... 12

DOCTOR OF PHILOSOPHY, *Summa Cum Laude*

Karl Taylor Compton, Ph.B., *Wooster University,* 1908, M.S., *Wooster University,* 1909. Subject, Physics. Thesis, "Studies in the Photoelectric Effect."

DOCTOR OF PHILOSOPHY, *Magna Cum Laude*

Claude William Heaps, B.S., *Northwestern University,* 1909. Subject, Physics. Thesis, "The Effect of Magnetic Fields on the Resistance of Metals and Conducting Crystals."

Joseph Stanley Laird, A.B., *University of Toronto,* 1909. Subject, Chemistry. Thesis, "A Study of the Inclusions in Electrolytic Silver, and their Effect on the Electrochemical Equivalent of Silver and the Electrochemical Equivalent of Cadmium."

Rollin Harvelle Tanner, A.B., *Adelbert College of W. R. U.,* 1896. Subject, Classics. Thesis, "The Chronology of the Comedies of Cratinus."

DOCTOR OF PHILOSOPHY, *Cum Laude*

Robert Granville Caldwell, A.B., *Wooster University,* 1904. Subject, History. Thesis, "The Lopez Expeditions to Cuba, 1848-1851."

Robert Glass Cleland, A.B., *Occidental College,* 1907, A.B., *Princeton University,* 1909. Subject, History. Thesis, "The

Interest of the United States in California between the years 1835 and 1846."

Otto Frederic Kampmeier, A.B., *State University of Iowa,* 1909. Subject, Biology. Thesis, "The Development of the Thoracic Duct in the Pig."

Charles Sheard, A.B., *St. Lawrence University,* 1903, A.M., *Dartmouth College,* 1907. Subject, Physics. Thesis, "The Ionization Produced by Hot Salts and by Freshly Heated Metal Wires."

Henry Bartlett Van Hoesen, A.B., *Hobart College,* 1905, A.M., *Princeton University,* 1906. Subject, Classics. Thesis, "The Roman Cursive."

DOCTOR OF PHILOSOPHY

Garrett Davis Buckner, B.S., *Kentucky State University,* 1908. Subject, Chemistry. Thesis, "Studies on the Silver Coulometer."

Steuben Butler Murray, Jr., A.B., *Princeton University,* 1909, A.M., *Princeton University,* 1910. Subject, Archaeology. Thesis, "Hellenistic Architecture in Syria."

Phillips Thomas, B.Sc., *Ohio State University,* 1904. Subject, Physics. Thesis, "A Study of the Action of Dielectrics under Applied Alternating Electric Stresses, with Regard to the Loss of Energy which Occurs."

MASTERS OF ARTS (*A.M.*) ON EXAMINATION.. 44

John Maudgridge Snowdon Allison, A.B., *Princeton University,* 1910

Walter Edmund Anderson, A.B., *University of Minnesota,* 1910

Arthur Aston, A.B., *Coe College,* 1907

Paul Sturgeon Berry, A.B., *Western Reserve University,* 1908

Charles McKee Cantrall, A.B., *Emporia College,* 1902, B.D., *Princeton Theological Seminary,* 1910

Thomas Lucian Cline, A.B., *Roanoke College,* 1911

James Harold Collord, A.B., *Princeton University,* 1911

Warren John Conrad, A.B., *Lafayette College,* 1910

James Shackelford Dauerty, A.B., *Lafayette College,* 1910

William Allen Duncan, A.B., *Westminster College,* 1910

Carroll Anderson Engle, A.B., *Washington and Lee University,* 1907

Edgar Moore Finck, Litt.B., *Princeton University,* 1910

Charles Leslie Fleece, A.B., *Central University,* 1910

Leo Augustine Hanigan, A.B., *Union University,* 1911

Alfred Cary Hawkins, B.S., *Teachers College, Columbia University,* 1909

Joe Thorn Jackson, A.B., *University of Georgia,* 1905

Bernard Levi Jefferson, A.B., *Kenyon College,* 1908

Homer Eaton Keyes, Litt.B., *Dartmouth College,* 1900
John Alexander Kirkpatrick, A.B., *Princeton University,* 1910
Frederick Paul McConkey, A.B., *Grove City College,* 1909
John Joseph McDonald, A.B., *Dartmouth College,* 1911
John Alexander McQueen, A.B., *Davidson College,* 1905, A.M., *Davidson College,* 1908
Frederick Maier, A.B., *Westminster College,* 1909
James Cook Martin, Ph.B., *Brown University,* 1908
Frank Edgar Mason, A.B., *Rutgers College,* 1910
George Merrimon Payne, A.B., *Maryville College,* 1910
Harold Francis Pellegrin, A.B., *Occidental College,* 1910
Antonio Honorio Perpetuo, Ph.B., *Wooster University,* 1909
Walter Alfred Phelps, B.S., *Dartmouth College,* 1910
William Barrow Pugh, Jr., A.B., *University of Pennsylvania,* 1910
James Forsyth Riggs, Jr., A.B., *Princeton University,* 1907
Walter Lowrie Ritter, A.B., *University of Pennsylvania,* 1910
William Abel Rogniat Russum, Litt.B., *Rutgers College,* 1910
Edmund James Saunders, A.B., *Williams College,* 1904
Lazar Schehr, A.B., *Princeton University,* 1910
Earl Baldwin Smith, A.B., *Bowdoin College,* 1911
George Morris Smith, A.B., *Roanoke College,* 1911
Clinton Emanuel Steinheiser, A.B., *Lafayette College,* 1910
Lee Walter Stephens, A.B., *Princeton University,* 1910
Harry Blaine Strock, A.B., *Gettysburg College,* 1909
Reuben Archer Torrey, Jr., A.B., *Lafayette College,* 1910
Carroll Raymond Ward, A.B., *Dartmouth College,* 1911
Edgar Carroll Throckmorton Wheeler, A.B., *Princeton University,* 1911
Henry Carroll Whitener, A.B., *Davidson College,* 1909

MASTERS OF ARTS (*A.M.*) ON THESIS.... 5

Marion Eppley, B.S., *Princeton University,* 1906
George Everett Hastings, A.B., *Princeton University,* 1904
John Hambleton Ober, A.B., *Princeton University,* 1909
Hewitt Reynolds, A.B., *Princeton University,* 1909
Charles Edward Roche, A.B., *Princeton University,* 1909

MASTER OF SCIENCE (*M.S.*) ON EXAMINATION.... 1

Albert Delafield Trenor, M.E., *Stevens Institute of Technology,* 1911

MASTER OF SCIENCE (*M.S.*) ON THESIS.... 1

John Renshaw Carson, B.S., *Princeton University,* 1907

ELECTRICAL ENGINEERS (*E.E.*)..... 5

Clarence Truman Baldwin, B.S., *Princeton University,* 1910
Paul Bruce Findley, B.S., *Princeton University,* 1909
Halsey Augustus Frederick, B.S., *Princeton University,* 1910
Paul Edward Moses
James Martinus Schoonmaker, Jr.

BACHELORS OF ARTS (*A.B.*)..... 120

Henry Dodge Appenzeller
John Hancock Arnett
Robert Franklin Arnold
Thomas Wilkinson Attridge
Horace Ross Baker
William Henry Baldwin
Henry Adams Barry
Robert Walter Baskerville
Edwin Ely Beach
James Christy Bell, Jr.
Byron David Benson
Walter Greer Benton
Eugene Ennalls Berl
John Allan Bertolet
Lawrence Dilworth Blair
Robert Graham Bosworth
William Jones Bratton
Robert Innocent Brent
Frederick Grater Burk
Charles Terry Butler
Paul Van Santvoord Camp
John Franklin Bruce Carruthers
Robert Day Carter, Jr.
Henry Wellington Cobb, Jr.
Mark Anthony Cooper
Francis Ralston Cross
Theodore Ledyard Cuyler, III
John Collins Dawson, Jr.
Burnham North Dell
John Bracken Donaldson, Jr.
Joseph Miller Duff, Jr.
Maurice Pratt Dunlap
Charles Pierson Eddy
Condit Nelson Eddy
Frank Willard Elmendorf
Peter Kenneth Emmons
Joseph Neff Ewing
Barclay Harding Farr
James Thomas Field
Roger Earl Fish
Joseph Cooke Fitts
Daniel Parry Forst
David Paulson Foster
Samuel Floyd Franklin
John Francis Gardiner
George Mackenzie Garmany
Richards Dexter Gile
Harpur Allen Gosnell
Meyer Greenbaum
Frank Davis Halsey
John DeHart Harrison
Raymond Foulston Haulenbeek
Charles Wolcott Henry
Otto Peter Heyn, Jr.
Douglas Horton
David Walker Houston, Jr.
Harry Ingersoll
Harry Barbour Irwin
Robert Forsyth Irwin, Jr.
Robert Wilkinson Johnson, Jr.
Wallace Fuller Judd
Frederick August Kahler, Jr.
Edward Dean Kalbfleisch
Don Morrison Kelley
Milton William King
Ernest Holton Klipstein
Richard Gilmore Knott
Maurice Raymond Koehler

William Roberts Kruse
Robert Lowry
Thomas Hamilton McCauley
Earl Irvine McClintock
Cyrus McCormick
David Beattie McCready
Robert Duncan MacMurdy
James Albert Hughes Magoun, Jr.
Richard Haywood Martin
George William Moock
Henry Earle Muzzy
Edwin Norman
Alexander Thomas Ormond, Jr.
Robert Clement Orr
John Milton Grosvenor Parker
Robert Lucien Patton
Edward Plaut
Grafton Howland Pyne
Herbert Fitz-Randolph Reck
John Insley Blair Reiley, Jr.
Jacob Riegel, Jr.
Gilbert Stuart Robertson
Carleton Otto Schaller
Albert Seckel
deBienville Keim Seeley
Irving Peter Seery
Frank Hazen Shafer
Samuel Robert Shafer
LeRoy Shultz Shultz
Herman Siefke, Jr.
Spencer Alec Sisson
Henry Arthur Smith
Thomas Guthrie Speers
James Kent Stoddard
Harold John Sweeny
Jesse Lee Terry
Evan Welling Thomas
Reginald Townsend Townsend
Thomas Wilson Trevor
Eugene Lauderdale Turner, Jr.
George Kay Tweddel
Abram Linwood Urban, Jr.
William Currell Vance
Eugene Melvin Vernon
William Wagner
Herbert Henry Ward, Jr.
Harold Collins Warren
Sheldon Sinclair Wells
Randolph West
Rollin Crawford Wilcox
Joseph Kendall Willing
Curtis Monteith Wylie

BACHELORS OF LETTERS (*Litt.B.*)..... 94

Crittenden Hull Adams
Henry Clinton Adams
Leon Joseph Barkhorn
Eugene Morse Barnhart
Thomas Quinn Beesley
Chauncey Belknap
Francis Livingston Bergen
Addison Hayes Bissell
Hermann Delius Boker
George Owen Bradford
Winthrop Newhall Breed
Carl Campbell Brigham
Brantz Mayor Bryan
George Wallace Bunn, Jr.
Ronald John Burke
John Crosby Butler
Glenn Warner Carpenter
Allan Crosby Carroll
Phinehas Prouty Chrystie
Sayers Coe
Eugene Virginius Connett, III
Walter Sheppard Cooper
Ross Mackenzie Craig
William Grimes Dancy
Uriah Morgan Davies
John Morton Davis
Henry Stockwell Day
Alvin Devereux

Robert Rennert Dieter
William Paul Dodds
Heroy Maxwell Dyckman
Lucien Beverstock Dyer
Henry Eagle
Cyrus James Fitton
Donald Webb Fitton
George Peter Foster
Alvan Luther Fowler, Jr.
Sidney David Gamble
Elijah Vaughan Gordy
Philip Van Rensselaer Griffin
Louis Miller Hahn
George Jesper Harding, Jr.
Edward Joseph Hart
Thomas Arthur Hart
Cuyler Heath
Charles English Henderson, Jr.
Campbell Higgins
Fred Gray Hodges
Arthur Cort Holden
George Lutz Hornbrook
Philip Diehl Hoyt
Frank Conrad Hughes
Richard Irwin
John Tarkington Jameson
Alfred Goddard Kay
Ledlie Irwin Laughlin
Jerome Lehman
Rudolf Ernst Lent
James Polk McKinney, Jr.
Dean Mathey
Vilroy Cole Miller
Laurence Potter Mills
Douglas Campbell Orbison
Frederick Rodney Paine
John Jacob Pentz
Willis Frank Rich
Everett Rushmore
Howard Martin Sawyer
Alexander Louis Schlesinger
James Bernheimer Seligman
Theodore Grenville Sewall
Thomas Banga Seyster
George Sloane
George Isaac Speer, Jr.
Warren Fellows Starkey
Thomas Swann
Harvey Sherman Talbott
Allen Tobey
Charles Stehlin Todd
William Hallam Tuck
Charles McGhee Tyson
John Hamilton Uhl
Russell Smith Walcott
Albert McCreery Wangler
Reginald Kenneth Waterbury
James White
Robert Edwin White
Sanford Brownell White
Edward Renwick Whittingham
Emory Hurlbut Wilder
Samuel Baker Williams
Garrett Ellis Winants
Alan Lloyd Wolf

Harold Hall Keith, as of the class of 1906

BACHELORS OF SCIENCE (*B.S.*)..... 19

Arnold Appelton Barnes
Charles James Bell
Harry Cook
Wallace deWitt
Harvey Edward Fisk, Jr.
Russell Eugene Gardner, Jr.
Richard Cocke Jones
Spencer Loch Jones
Arthur Furman Kraetzer
Frank Edward Lippman

Charles Lionel McCarthy
Allen McLanahan
John Henry Mullin
Ethelbert Paul Nevin
Florence Joseph O'Donoghue
Kenneth Eardley Plants
Sylvan Joseph Rauch
Kennard Stephenson
Edwin Inslee Thompson

CIVIL ENGINEERS (*C.E.*)..... 45

William Wait Battles
Charles Luckey Bowman
Charles Benjamin Brush
John Haydock Carroll, Jr.
Francis Guerin Cart, Jr.
Theobold Forstall Clark
Curtis Fields Columbia
Agnew Thomson Dice, Jr.
Carl Kirsch Dresser
George Harold Dunn
Percy Noyes Edwards
Franklin Newlin Entwisle
Harold Bertels Fell
Henry Leroy Felt
Walter Ross Fisher
Benjamin Maltby Fowler, Jr.
Lachlan Stewart Gatter
Ralph Berringer Higgins
Bernard Duncan McClave
Warden McLean
Donald Mather McLeod
John Cochran Martin
Richard Augustus Medina
Warren Shepard Matthews
Harold Huston Ormond
Henry Albert Orrick, Jr.
John Griffen Pennypacker
Charles Irving Place
Clemis Plager
Horace Platt
William Humphreys Powell, Jr.
Louis Tartler Meredith Ralston
Chauncey Wattles Reed
Charles Gilbert Reilly
Seth Ridout
Gaylord Riggs
Charles Bristed Rockwell, Jr.
George Robinson Roe
Henry Albert Schauffler
James Guthrie Shaw, Jr.
Charles Hurlbut Sterrett
William Bullock Waterman
Robert Wilson Wigton

John Edward Deford, as of the class of 1911
Benjamin Ogden Wilkins, as of the class of 1911

HONORS CONFERRED, 1911-1912

SENIOR HONORMEN

Honors for General Excellence

BACHELOR OF ARTS COURSE

First Group—*Magna cum laude*

Joseph Cooke Fitts
Samuel Floyd Franklin
Raymond Foulston Haulenbeek, *Latin Salutatory*
Douglas Horton
Frederick August Kahler, Jr.
Curtis Monteith Wylie

Second Group—*Cum laude*

Horace Ross Baker
William Henry Baldwin
Henry Adams Barry
Byron David Benson
William Jones Bratton
John Franklin Bruce Carruthers
Burnham North Dell
Maurice Pratt Dunlap
Condit Nelson Eddy
Peter Kenneth Emmons
Roger Earl Fish
Frank Davis Halsey
John DeHart Harrison
Otto Peter Heyn, Jr.
Robert Wilkinson Johnson, Jr.
Richard Gillmore Knott
Earl Irvine McClintock
Cyrus McCormick
Gilbert Stuart Robertson
Samuel Robert Shafer
LeRoy Shultz Shultz
Herman Siefke, Jr.
Spencer Alec Sisson
Thomas Guthrie Speers
Harold John Sweeny
George Kay Tweddle
William Wagner
Joseph Kendall Willing

BACHELOR OF LETTERS COURSE

First Group—*Magna cum laude*

Sidney David Gamble

SECOND GROUP—*Cum laude*

Crittenden Hull Adams
Chauncey Belknap, *Valedictory*
Carl Campbell Brigham
Walter Sheppard Cooper
Uriah Morgan Davies
Alvan Luther Fowler, Jr.
Dean Mathey
Douglas Campbell Orbison
Edward Renwick Whittingham

BACHELOR OF SCIENCE COURSE

SECOND GROUP—*Cum laude*

Arnold Appleton Barnes
Harry Cook
Arthur Furman Kraetzer
Frank Edward Lippman
Florence Joseph O'Donoghue
Sylvan Joseph Rauch

CIVIL ENGINEERING COURSE

FIRST GROUP—*Magna cum laude*

John Griffen Pennypacker

SECOND GROUP—*Cum laude*

John Haydock Carroll, Jr.
Franklin Newlin Entwisle
Benjamin Maltby Fowler, Jr.
Richard Augustine Medina
James Guthrie Shaw, Jr.

SPECIAL HONORS IN PARTICULAR DEPARTMENTS

PHILOSOPHY. *Highest Honors*—Samuel Floyd Franklin. *High Honors*—Douglas Horton, Carl Campbell Brigham. *Honors*—Horace Ross Baker, Peter Kenneth Emmons.

HISTORY, POLITICS, AND ECONOMICS. *Highest Honors*—Cyrus McCormick. *High Honors*—Chancey Belknap, Roger Earl Fish, Sidney David Gamble, Curtis Monteith Wylie.

ART AND ARCHÆOLOGY. *High Honors*—Russell Smith Walcott. *Honors*—Arthur Cort Holden.

CLASSICAL HUMANITIES. *Highest Honors*—Raymond Foulston Haulenbeek. *High Honors*—John De Hart Harrison. *Honors*—Robert Franklin Arnold, Condit Nelson Eddy, Barclay Harding Farr, Harpur Allen Gosnell, Grafton Howland Pyne.

ENGLISH. *Highest Honors*—Samuel Robert Shafer. *High Honors*—Gilbert Stuart Robertson.

MODERN LANGUAGES, GERMANIC. *High Honors*—Frederick August Kahler, Jr.

MATHEMATICS AND PHYSICS. *High Honors*—Joseph Cooke Fitts. *Honors*—Arnold Appleton Barnes, Russell Eugene Gardner, Jr., Frank Davis Halsey, Frank Edward Lippman, Florence Joseph O'Donoghue.

BIOLOGY. *High Honors*—Robert Wilkinson Johnson, Jr.

FELLOWS

(For names of Fellows, see page 418.)

SENIOR PRIZEMEN

GEORGE POTTS BIBLE PRIZES

James Thomas Field
James Wilkinson Macartney

CLASS OF 1859 PRIZE IN ENGLISH LITERATURE

Harold John Sweeny

LYNDE DEBATE PRIZES

First—Edward Renwick Whittingham
Second—Irving Peter Seery
Third—Peter Kenneth Emmons

LYNDE DEBATERS

From the American Whig Society	*From the Cliosophic Society*
Claud Hanbury Cooke	John Bracken Donaldson, Jr.
Irving Peter Seery	Peter Kenneth Emmons
Edward Renwick Whittingham	Joseph Cooke Fitts

BAIRD PRIZES

The Baird Prize—Everett Rushmore
Oratory—Robert Walter Baskerville
Delivery—Claud Hanbury Cooke
Poetry—Raymond Foulston Haulenbeek
Disputation, First—Claud Hanbury Cooke
Disputation, Second—Edward Renwick Whittingham

SPENCER TRASK DEBATE PRIZE

Claud Hanbury Cooke

LYMAN H. ATWATER PRIZE IN POLITICAL SCIENCE
Not awarded

ALEXANDER GUTHRIE MCCOSH PRIZE IN PHILOSOPHY
Carl Campbell Brigham

C. O. JOLINE PRIZE IN AMERICAN POLITICAL HISTORY
Crittenden Hull Adams
Honorable Mention—Henry Dodge Appenzeller

CLASS OF 1869 PRIZE IN ETHICS
Samuel Floyd Franklin

NEW YORK HERALD PRIZE
Not awarded

JUNIOR HONORMEN

BACHELOR OF ARTS COURSE

FIRST GROUP—*High General Honors*

Charles Edward Bingham
Philip Littlejohn Coffin
James Penrose Harland
Joseph Proctor Knott, Jr.
Sherley Warner Morgan
Albert Starnes Richardson
Warne Phillips Schenck
Alan Tower Waterman

SECOND GROUP—*General Honors*

Frederick Harman Atwood
Gladwin Bouton
Wendell Wheeler Brown
Edwin Alfred Cowen
Arthur Pierson Curtis
Willard Stanley Danser
Wilburt Cornell Davison
Arthur Eugene Fox
John Applegate Furman, Jr.
William Roger Gilmour
Henry Eastman Hackney
DeWitt Clinton Jones, III
Alan Wood Lukens
Stanley Matthews
Stanley Matthews Moffat
John Earnshaw Murdoch
Charles Scribner, Jr.
Lionel Valdemar Silvester
Arthur Delafield Smith
Arthur Lusk Trowbridge
William Richardson Wensley
Thomas King Whipple

BACHELOR OF LETTERS COURSE

FIRST GROUP—*High General Honors*

Leo E. Bashinsky
Charles William Hendel, Jr.

SECOND GROUP—*General Honors*

Frank Dennette Adams
William Merrill Chester
Edwin Shepard Ford
Burritt Clarke Harrington
George Ross Kenyon
Rowland Hughes McKee
Samuel Shepherd Markham
Charles Morehead Nebeker
Wilder Graves Penfield
Peter Richardson
Thomas Renaud Rutter
Edward Ridgely Simpson

BACHELOR OF SCIENCE COURSE

FIRST GROUP—*High General Honors*

Nathaniel Howell Furman
Alan Fitz Randolph

SECOND GROUP—*General Honors*

Harry William Hazard, Jr.
Clyde Douglas Marlatt
Lane Hart Spencer

CIVIL ENGINEERING COURSE

SECOND GROUP—*General Honors*

James Reid Semple
John Joseph Sullivan, Jr.

JUNIOR PRIZEMEN

JUNIOR FIRST HONOR PRIZE

Divided equally between
Albert Starnes Richardson and Charles William Hendel, Jr.

DICKINSON PRIZE

Charles William Hendel, Jr.
Honorable Mention—Arthur Eugene Fox

JUNIOR ORATOR MEDALS

First—Rowland Hughes McKee
Second—Charles Edward Bingham
Third—Albert Starnes Richardson
Fourth—Arthur Delafield Smith

JUNIOR ORATORS

From the Cliosophic Society	*From the American Whig Society*
Charles Edward Bingham	Alfred Wesley Cooper
Gladwin Bouton	Raymond McAdoo Jones
Rowland Hughes McKee	Albert Starnes Richardson
James McKinley Rose	Arthur Delafield Smith

MACLEAN PRIZE
Rowland Hughes McKee

FREDERICK BARNARD WHITE PRIZE IN ARCHITECTURE
Charles Over Cornelius
Honorable Mention—Russell Smith Walcott

CLASS OF 1876 MEMORIAL PRIZE FOR DEBATE
Paul Forest Myers

THOMAS B. WANAMAKER ENGLISH LANGUAGE PRIZE
Arthur Pierson Curtis

CLASS OF 1870 JUNIOR PRIZE IN OLD ENGLISH
Joseph Proctor Knott, Jr.
Honorable Mention—John Applegate Furman, Jr.

CLASS OF 1870 JUNIOR PRIZE IN ENGLISH
Charles William Hendel, Jr.
Honorable Mention—Joseph Proctor Knott, Jr.

CLASS OF 1883 JUNIOR ENGLISH PRIZE IN THE SCHOOL OF SCIENCE
Charles William Hendel, Jr.

MARY CUNNINGHAM HUMPHREYS JUNIOR GERMAN PRIZES
First—Wilmer Landis
Second—Loren Greeneo Gatch

PHILO SHERMAN BENNETT PRIZE IN POLITICAL SCIENCE
Clarence Van Schaick Mitchell

R. PERCY ALDEN MEMORIAL PRIZE IN FRENCH
Milton McIntyre Brown

SOPHOMORE HONORMEN

BACHELOR OF ARTS COURSE

FIRST GROUP—*High General Honors*

Benjamin E. Biswanger, Central High School, Philadelphia, Pa.
Charles Bunn, Hotchkiss School, Lakeville, Conn.
Severn T. W. Cull, Boys' Latin School, Baltimore, Md.

John I. Hartman,	Lawrenceville School, Lawrenceville, N. J.
Herbert R. Pyne,	Groton School, Groton, Mass.
Adrian Riker, Jr.,	Lawrenceville School, Lawrenceville, N. J.
William B. Tippetts,	Mercersburg Academy, Mercersburg, Pa.

SECOND GROUP—*General Honors*

Joseph P. Blair, Jr.,	Lawrenceville School, Lawrenceville, N. J.
Rolla L. Carpenter,	Detroit University School, Detroit, Mich.
John M. Colt,	West High School, Rochester, N. Y.
Ralph R. Curtis,	Mt. Hermon School, Mt. Hermon, Mass.
Allen W. Dulles,	Auburn High School, Auburn, N. Y.
James B. Hunter, Jr.,	Jersey City High School, Jersey City, N. J.
Ernest K. Loveland,	Wyoming Seminary, Kingston, Pa.
William S. Middleton,	Harrisburg High School, Harrisburg, Pa.
Charles W. Morrisey,	Perkiomen Seminary, Pennsburg, Pa.
Ralph B. Nesbitt,	Kiskiminetas Springs School, Saltsburg, Pa.
Ernest W. Puttkammer,	Harvard School for Boys, Chicago, Ill.
Marcus A. Spencer,	Shady Side Academy, Pittsburg, Pa.
George E. Strebel,	Boys' High School, Brooklyn, N. Y.
David E. J. Wilson,	Allen Preparatory School, Portland, Ore.

LITT.B. AND B.S. COURSES

FIRST GROUP—*High General Honors*

Torrance Fiske,	Central High School, Minneapolis, Minn.
John C. Vroman, Jr.,	Tome School for Boys, Port Deposit, Md.

SECOND GROUP—*General Honors*

Pierce Butler, Jr.,	St. Paul Academy, St. Paul, Minn.
Eliot Brewster Coulter,	University School, Chicago, Ill.
Arthur H. Cowl,	Columbia Grammar School, New York, N. Y.
Oliver B. Elsworth,	Lafayette High School, Buffalo, N. Y.
Sigmund Manheim,	Newark High School, Newark, N. J.
Carl W. Messinger,	Hartford High School, Hartford, Conn.
Gilbert M. Owlett,	Perkiomen Seminary, Pennsburg, Pa.
Allen G. Shenstone,	Harbord Collegiate Institute, Toronto, Can.
Edward D. Spalding,	Detroit University School, Detroit, Mich.
Burnham K. Taylor,	Boys' High School, Brooklyn, N. Y.
Albert E. Van Court,	Detroit University School, Detroit, Mich.

CIVIL ENGINEERING COURSE

SECOND GROUP—*General Honors*

Robert H. Gibson, Hoosac School, Hoosick, N. Y.
Moss A. Kent, Rome Free Academy, Rome, N. Y.
Charles R. LeCompte, Jr., Lakewood High School, Lakewood, N. J.
William W. Voorhees, Princeton High School, Princeton, N. J.

SOPHOMORE PRIZEMEN

CLASS OF 1861 PRIZE IN MATHEMATICS

Allen Goodrich Shenstone

Honorable Mention—Adrian Riker, Jr.

FRANCIS BIDDLE SOPHOMORE ESSAY PRIZE

Donald Robert Baker

Honorable Mention—Jerome Edson Andrews

CLASS OF 1870 SOPHOMORE ENGLISH PRIZE

John Ives Hartman

Honorable Mention—Torrance Fiske

FRESHMAN HONORMEN

BACHELOR OF ARTS COURSE

FIRST GROUP—*High General Honors*

Charles C. Allen, Jr., Central High School, St. Louis, Mo.
Wilder H. Haines, University School, Cleveland, O.
Mason Olcott, Browning School, New York, N. Y.
Stewart McM. Robinson, DeLancey School, Philadelphia, Pa.

SECOND GROUP—*General Honors*

Philip Bongiorno, Burroughs School, Great Neck, N. Y.
Clarence D. Brenner, Rayen School, Youngstown, O.
William T. Caldwell, Princeton High School, Princeton, N. J.
Nicholas C. Culolias, East Liverpool High School, East Liverpool, O.
David Fleming, III, Lawrenceville School, Lawrenceville, N. J.
Everett G. Frank, Philips Exeter Academy, Exeter, N. H.
Edward I. Heft, Louisville Male High School, Louisville, Ky.
Isidor Kaufman, DeWitt Clinton High School, New York N. Y.

Cedric H. Lewey,	Pittsburgh Academy, Pittsburgh, Pa.
Frank L. Miller, Jr.	
Donald S. Morrison,	Mt. Hermon School, Mt. Hermon, Mass.
Thomas M. H. Nimick,	Shady Side Academy, Pittsburgh, Pa.
George F. Riegel,	Chestnut Hill Academy, Philadelphia, Pa.
William M. Smith, Jr.,	Asheville School, Asheville, N. C.
James J. Swofford, Jr.,	Central High School, Kansas City, Mo.
Friedrich M. Velte,	Mercersburg Academy, Mercersburg, Pa.
Louis M. Washburn,	St. Luke's School, Wayne, Pa.
Roger B. Williams,	Boys' Latin School, Baltimore, Md.

LITT.B. AND B.S. COURSES

FIRST GROUP—*High General Honors*

Frank K. Dimon,	State Normal School, Lock Haven, Pa.
Maurice Pate,	East Side High School, Denver, Colo.

SECOND GROUP—*General Honors*

Alfred L. Booth,	High School, Webster Groves, Mo.
Harold W. Chapin,	Polytechnic Preparatory School, Brooklyn, N. Y.
Robert S. Cowan,	St. Paul's School, Concord, N. H.
Roland M. Glenn,	Perkiomen Seminary, Pennsburg, Pa.
Robert B. Gribbon,	Cedarcroft School, Plainfield, N. J.
Russell W. Holman,	Barringer High School, Newark, N. J.
Philip L. Jackson,	Haverford School, Haverford, Pa.
Sidney L. Levengood,	Radnor High School, Wayne, Pa.
Fred C. Liebhardt,	East Side High School, Denver, Colo.
Brunson S. McCutchen,	Phillips Exeter Academy, Exeter, N. H.
Robert G. Macks,	Pingry School, Elizabeth, N. J.
Anthony S. Morris, Jr.,	Haverford School, Haverford, Pa.
Harry F. Porter,	Trenton High School, Trenton, N. J.
Olin S. Putnam,	Johnstown High School, Johnstown, N. Y.
Harold W. Rehm,	Temple University, Philadelphia, Pa.
Robert H. Scannell,	Lawrenceville School, Lawrenceville, N. J.
Edwin C. Sharp,	Perkiomen Seminary, Pennsburg, Pa.
Murray C. Smouse,	Princeton Preparatory School, Princeton. N. J.
John Q. Stewart,	Central High School, Harrisburg, Pa.
Creighton L. Wood,	East Side High School, Denver, Colo.
Ernest B. Wood,	Perkiomen Seminary, Pennsburg, Pa.

CIVIL ENGINEERING COURSE

SECOND GROUP—*General Honors*

Paul D. Adams, II,	Barringer High School, Newark, N. J.
Druard N. Allman,	William Penn Charter School, Philadelphia, Pa.
Alan Crawford,	Haverford School, Haverford, Pa.
William C. Dunlap,	Harrisburg Academy, Harrisburg, Pa.
John H. Faber,	Central High School, Philadelphia, Pa.

FRESHMAN PRIZEMEN

CLASS OF 1883 FRESHMAN ENGLISH PRIZE IN THE SCHOOL OF SCIENCE

William Crawford Dunlap

Honorable Mention—Leonard Cox

ORANGE ALUMNI ASSOCIATION PRIZE SCHOLARSHIP, 1911-1912

William Stuart Annin

ALTON B. PARKER PRIZES FOR FRESHMAN DEBATE

First—James Jefferson Swofford, Jr.

Second—Harold Wolcott Chapin

Honorable Mention—Alfred Lee Booth

STUDENTS QUALIFYING FOR REGULAR STANDING

HONORMEN

FIRST GROUP—*High General Honors*

Eric Lattimore Alling — Clarence James Gamble — Edward Mack, Jr.

SECOND GROUP—*General Honors*

John Harold Fox — Thomas Ormsby Stokes

Roy Petran Lingle — James Duckworth Stover

Gilchrist B. Stockton — Carl Fritz Taeusch

William Charles Roberts Williams

PART X

GRADUATE COUNCIL, ALUMNI ASSOCIATIONS, LISTS OF STUDENTS, DIRECTORY, AND INDEX

THE GRADUATE COUNCIL OF PRINCETON UNIVERSITY

Chairman, Francis Speir, '77, 52 Wall St., New York.

Secretary, H. G. Murray, '93, Princeton, N. J.

Finance Committee: Francis Speir, '77, *Chairman;* James Laughlin, Jr., '68; W. W. Lawrence, '78; D. M. Barringer, '79; Frank C. Roberts, '83; D. H. McAlpin, '85; G. F. McKinney, '91; H. G. Murray, '93; Percy R. Pyne, II, '03.

Committee on Class Organization: W. R. Wilder, '79, *Chairman;* William Dulles, '78; A. G. Todd, '84; John W. Queen, '87; Archibald A. Gulick, '97; F. P. King, '00; W. E. Hope, '01; Charles A. Cass, '02; R. L. Walton, '05; J. C. Brush, '09.

Committee on Schools: V. L. Collins, '92, *Chairman;* William T. Vlymen, '81; F. G. Landon, '81; W. F. Timlow, '86; Malcolm Lloyd, Jr., '94; A. H. McAlpin, '07.

Committee on Publicity: Charles W. Halsey, '98, *Chairman;* Rudolph E. Schirmer, '80; Frederick Evans, '86; B. Van D. Hedges, '88; O. DeG. Vanderbilt, Jr., '06; A. P. Monroe, '11.

Committee on Undergraduate Activities: J. E. Bathgate, '94, *Chairman;* John Larkin, '82; P. A. Rollins, '89; G. C. Fraser, '93; Knox Taylor, '95; W. W. Phillips, '95; William B. Reed, Jr., '96; H. L. Mills, '04; A. C. Studer, Jr., '08; W. M. Wilkins, '10; Joseph N. Ewing, '12.

Committee on Alumni Associations: Adrian H. Larkin, '87, *Chairman;* D. W. McCord, '89; John I. Bright, '90; Lawrence C. Woods, '91; D. M. F. Weeks, '95; J. L. Crane, '99; J. H. Harrison, '99; R. C. McNamara, '03.

ALUMNI ASSOCIATIONS

ALUMNI ASSOCIATION OF NASSAU HALL.—
Chairman, Francis Speir, Esq., '77.

WESTERN ASSOCIATION OF PRINCETON CLUBS.—
Secretary, Ralph A. Lemcke, Esq., 1901, Lemcke Bldg., Indianapolis, Ind.

CALIFORNIA

PRINCETON CLUB OF SOUTHERN CALIFORNIA.—
Secretary, H. T. Muzzy, Esq., 1904, 330 Security Bldg., Los Angeles, Cal.

PRINCETON ALUMNI ASSOCIATION OF NORTHERN CALIFORNIA AND NEVADA.—
Secretary, James A. Mackenzie, Esq., '99, 523 Balboa Bldg., San Francisco, Cal.

COLORADO

ROCKY MOUNTAIN PRINCETON CLUB.—
Secretary, Frederick S. Titsworth, Esq., '93, Equitable Bldg., Denver, Col.

DELAWARE

PRINCETON ALUMNI ASSOCIATION OF DELAWARE.—
Secretary, John F. Neary, Esq., 1900, duPont Bldg., Wilmington, Del.

DISTRICT OF COLUMBIA

PRINCETON ALUMNI ASSOCIATION OF THE DISTRICT OF COLUMBIA AND SOUTHERN STATES.—
Secretary, Frank B. Fox, Esq., 1905, Washington Loan and Trust Bldg., Washington, D. C.

IDAHO

PRINCETON ALUMNI ASSOCIATION OF IDAHO.—

Secretary, P. B. Carter, Esq., 1905, Boise City National Bank Bldg., Boise City, Idaho.

ILLINOIS

PRINCETON CLUB OF CHICAGO.—

Secretary, Robert C. McNamara, Esq., 1903, 623 S. Wabash Ave., Chicago, Ill.

INDIANA

PRINCETON ALUMNI ASSOCIATION OF INDIANA.—

Secretary, G. M. Brown, Esq., 1908, Indianapolis Stove Co., Indianapolis, Ind.

IOWA

PRINCETON CLUB OF CEDAR RAPIDS.—

Secretary, Arthur Poe, Esq., 1900, care of American Cereal Co., Cedar Rapids, Iowa.

KENTUCKY

PRINCETON ALUMNI ASSOCIATION OF LOUISVILLE.—

Secretary, John M. Clancy, Esq., 1903, Cherokee Park, Louisville, Ky.

MARYLAND

PRINCETON ALUMNI ASSOCIATION OF MARYLAND.—

Secretary, Gresham H. Poe, Esq., 1902, 8-10 South St., Baltimore, Md.

MASSACHUSETTS

PRINCETON ALUMNI ASSOCIATION OF NEW ENGLAND.—

Secretary, Francis L. Coolidge, Esq., '84, 178 Devonshire St., Boston, Mass.

MICHIGAN

PRINCETON ALUMNI ASSOCIATION OF MICHIGAN.—

Secretary, Raymond Russell, Esq., 1908, 859 Jefferson Ave., Detroit, Mich.

MINNESOTA

PRINCETON ALUMNI ASSOCIATION OF THE NORTHWEST.—

Secretary, Thomas C. Roberts, Esq., 1910, 1603 Fourth Ave., S., Minneapolis, Minn.

MISSOURI

PRINCETON CLUB OF THE SOUTHWEST.—

Secretary, Nathan S. Hendrix, Esq., 1901, Eighth and Bank Sts., Kansas City, Mo.

PRINCETON CLUB OF ST. LOUIS.—

Secretary, David D. Metcalfe, Esq., 1904, 401 Pierce Bldg., St. Louis, Mo.

NEBRASKA

PRINCETON ALUMNI ASSOCIATION OF NEBRASKA.—

Secretary, Glenn C. Wharton, Esq., 1903, care of Omaha Lumber and Coal Co., Omaha, Neb.

NEW JERSEY

PRINCETON ALUMNI ASSOCIATION OF NORTHERN NEW JERSEY.—

Secretary, Murray Olyphant, Esq., 1905, Dwight Place, Englewood, N. J.

PRINCETON ALUMNI ASSOCIATION OF HUDSON COUNTY, N. J.—

President, Joseph A. Dear, Esq., '93, care of Jersey Journal, Jersey City, N. J.

PRINCETON ALUMNI ASSOCIATION OF MONTCLAIR AND VICINITY.—

Secretary, Frank D. Brewer, Esq., 1910, Highland Ave., Glen Ridge, N. J.

PRINCETON CLUB OF NEWARK.—

Secretary, James L. Martin, Esq., 1907, 11 Clinton St., Newark, N. J.

PRINCETON ALUMNI FEDERATION OF NEW JERSEY.—

Secretary, Stephen H. Plum, Esq., 1901, 845 Broad St., Newark, N. J.

PRINCETON ALUMNI ASSOCIATION OF THE ORANGES.—

Secretary, Robert E. Annin, Esq., '80, 270 Vose Ave., So. Orange, N. J.

PRINCETON ALUMNI ASSOCIATION OF PASSAIC COUNTY.—

Secretary, Howard G. Turner, Esq., 1909, 200 Broadway, Paterson, N. J.

PRINCETON CLUB OF PLAINFIELD.—

Secretary, Dudley H. Barrows, Esq., 1907, Plainfield, N. J.

PRINCETON CLUB OF TRENTON.—

Secretary, W. M. Dickinson, Esq., '97, 135 East State St., Trenton, N. J.

NEW YORK

PRINCETON CLUB OF ALBANY AND VICINITY.—

Secretary, Charles W. LaDow, Esq., 1908, 592 Madison Ave., Albany, N. Y.

PRINCETON ALUMNI ASSOCIATION OF LONG ISLAND.—

Secretary, Burchard Dutcher, Esq., 1907, 40 Wall St., New York, N. Y.

PRINCETON CLUB OF BUFFALO.—

Secretary, Howard E. Gansworth, Esq., 1901, 327 Washington St., Buffalo, N. Y.

PRINCETON CLUB OF NEW YORK.—

Secretary, W. C. Booth, Esq., '00, 121 East 21st St., New York, N. Y.

PRINCETON ALUMNI ASSOCIATION OF ROCHESTER, N. Y., AND VICINITY.—

Secretary, Martin H. Eisenhart, Esq., 1905, 516 Monroe Ave., Rochester N. Y.

PRINCETON ALUMNI ASSOCIATION OF CENTRAL NEW YORK.—

Secretary, Stuart F. Raleigh, Esq., 1911, Post Standard Bldg., Syracuse, N. Y.

OHIO

PRINCETON ALUMNI ASSOCIATION OF CINCINNATI.—

Secretary, Cecil H. Gamble, Esq., 1905, 521 Glenwood Ave., Cincinnati, Ohio.

PRINCETON ALUMNI ASSOCIATION OF NORTHERN OHIO.—

Secretary, H. A. Hauxhurst, Esq., 1902, Hippodrome Bldg., Cleveland, Ohio.

PRINCETON ALUMNI ASSOCIATION OF TOLEDO.—

Secretary, Edgar H. Johnson, Esq., 1902, 1533 Nicholas Bldg., Toledo, Ohio.

PENNSYLVANIA

CENTRAL PENNSYLVANIA ALUMNI ASSOCIATION OF PRINCETON UNIVERSITY.—

Secretary, W. H. Musser, Esq., '96, 215 N. Second St., Harrisburg, Pa.

PRINCETON CLUB OF PHILADELPHIA.—

Secretary, Walter W. N. Righter, Esq., 1906, 1521 Sansom St., Philadelphia, Pa.

PRINCETON ALUMNI ASSOCIATION OF WESTERN PENNSYLVANIA.—

Secretary, Benjamin M. Price, Esq., 1904, 76 St. Nicholas Bldg., Pittsburg, Pa.

PRINCETON ALUMNI ASSOCIATION OF NORTHEASTERN PENNSYLVANIA.—

Secretary, Paul Bedford, Esq., '97, Coal Exchange Bldg., Wilkes-Barre, Pa.

TENNESSEE

PRINCETON ALUMNI ASSOCIATION OF TENNESSEE.—

Secretary, Walter H. Watkins, Esq., 1900, Hamilton National Bank Bldg., Chattanooga, Tenn.

TEXAS

THE BORDER ASSOCIATION.—

Secretary, Vance Stewart, Esq., 1905, American Bank Bldg., El Paso, Texas.

PRINCETON ALUMNI ASSOCIATION OF TEXAS.—

Secretary, Charles C. Cresson, Jr., Esq., '95, Alamo Bank Bldg., San Antonio, Texas.

UTAH

INTER-MOUNTAIN PRINCETON ASSOCIATION.—

Secretary.—Renwick S. McNiece, Esq., 1907, 1136 Blaine Ave., Salt Lake City, Utah.

WASHINGTON

PRINCETON CLUB OF SEATTLE.—

Secretary, Nicholas F. Jahn, Esq., 1909, 114 Railroad Ave., S., Seattle, Wash.

INDIA

PRINCETON ALUMNI ASSOCIATION OF INDIA.—

Secretary, C. D. Thompson, Jr., Esq., 1905, Princeton Hall, Christian College, Allahabad, India.

STUDENTS OF THE UNIVERSITY

STUDENTS IN THE GRADUATE SCHOOL

FELLOWS

Amy, Ernest Francis, East Bangor, Pa., 9 Madison St.
A.B., Wesleyan University, 1909.
A.M., Wesleyan University, 1911.
Charles Scribner University Fellow in English Literature.

Anderson, Walter Edmund, Stillwater, Minn., 33 Bank St.
A.B., University of Minnesota, 1910.
A.M., Princeton University, 1912.
J. S. K. Fellow in Mathematics.

Beetle, Ralph Dennison, Hanover, N. H., 46 Park Pl.
A.B., Dartmouth College, 1906.
A.M., Dartmouth College, 1911.
J. S. K. Fellow in Mathematics.

Bennett, Albert Arnold, Providence, R. I., 33 Bank St.
A.B., Brown University, 1910.
A.M., Brown University, 1910.
Sc.M., Brown University, 1911.
Charlotte Elizabeth Procter Fellow.

Brigham, Carl Campbell, Lowell, Mass., 17 Olden St.
Litt.B., Princeton University, 1912.
Chancellor Green Fellow in Mental Science.

Brokenshire, Charles Digory, Princeton, N. J., 18 Edwards Pl.
A.B., Marietta College, 1907.
A.M., Marietta College, 1907.
B.D., Princeton Theological Seminary, 1910.
Fellow in Semitics.

Brown, Charles Raymond, Belspring, Va., Merwick
A.B., Roanoke College, 1910.
A.M., Princeton University, 1911.
Boudinot Fellow in History.

Carpenter, William Seal, Philadelphia, Pa., 24 Bank St.
B.S., University of Pennsylvania, 1911.
A.M., University of Pennsylvania, 1912.
Class of 1883 Fellow in Politics.

Compton, Karl Taylor, Wooster, O., Merwick
Ph.B., Wooster University, 1908.
M.S., Wooster University, 1909.
Ph.D., Princeton University, 1912.
Charlotte Elizabeth Procter Fellow.

Crandall, Irving Bardshar, Chattanooga, Tenn., 5 Nassau St.
A.B., University of Wisconsin, 1909.
A.M., Princeton University, 1910.
Class of 1860 Fellow in Experimental Science.

Cummings, Hubertis Maurice, Harrisburg, Pa., Merwick
A.B., Princeton University, 1907.
A.M., Princeton University, 1908.
Fellow in English.

Dellinger, John Howard, Chevy Chase, Md., 41 Park Pl.
A.B., George Washington University, 1908.
Fellow in Physics.

Doxsee, Carll Whitman, Bay Shore, N Y., 9 Madison St.
A.B., Wesleyan University, 1909.
A.M., Wesleyan University, 1910.
Fellow in Philosophy.

Fleece, Charles Leslie, Campbellsville, Ky., Merwick
A.B., Central University, 1910.
A.M., Princeton University, 1912.
Harvard Fellow in Chemistry.

Grose, Howard Bristol, Wellesley Hills, Mass., Merwick
Ph.B., Brown University, 1903.
A.M., Princeton University, 1911.
Porter Ogden Jacobus Fellow.

Hanigan, Leo Augustine, Schenectady, N. Y., 28 Vandeventer Ave.
A.B., Union University, 1911.
A.M., Princeton University, 1912.
Fellow in Classics.

Harrer, Gustave Adolphus, Jr., Brooklyn, N. Y.,
A.B., Princeton University, 1910. 31 William St.
Fellow in Classics.

Hayes, Albert Orion, Granby, Quebec, Canada.
B.S., McGill University, 1908. 108 Mercer St.
M.S., McGill University, 1910.
Class of 1883 Fellow.

Henderson, Walter Brooke, Brown's Town, St. Ann,
Ph.B., Brown University, 1910. Jamaica, W. I., 6 Bank St.
Fellow in English.

Hickernell, Louis Max, Saegerston, Pa., 8 E B
A.B., Allegheny College, 1910.
Francis Hinton Maule Fellow in Biology.

Hoy, William Edwin, Jr., Princeton, N. J., 16 Madison St.
A.B., Franklin & Marshall College, 1911.
Class of 1877 Fellow in Biology.

Jefferson, Bernard Levi, Danville, O., Merwick
A.B., Kenyon College, 1908.
A.M., Princeton University, 1912.
Fellow in English.

Keyes, Clinton Walker, Monterey, Mass., 16 N W
A.B., Princeton University, 1910.
John Harding Page Fellow in Classics.

McDiarmid, Richard John, Fingal, Ontario, Canada,
A.B., Toronto University, 1910. 14 Prospect Ave.
M.Sc., University of Pittsburgh, 1911.
Thaw Fellow in Astronomy.

McMahon, Charles Omar, Philadelphia, Pa., 6 Bank St.
A.B., Harvard University, 1909.
Boudinot Fellow in Modern Languages.

Martin, James Cook, Southington, Conn.,
Ph.B., Brown University, 1908. 176 The Western Way
Fellow in Geology.

Mooney, William West, Brentwood, Tenn.,
A.B., Vanderbilt University, 1899. 240 Nassau St.
A.M., Vanderbilt University, 1904.
Fellow in Classics.

Quinn, Elton Leroy, Pittsfield, Me., Jefferson Rd.
A.B., Bates College, 1910.
Fellow in Chemistry.

Reinke, Edwin Eustace, Bethlehem, Pa., 36 Wiggins St.
A.B., Lehigh University, 1908.
A.M., Lehigh University, 1909.
Gordon MacDonald Fellow in Biology.

Rife, Raleigh Schuyler, Crete, Neb., 63 B S
A.B., Doane College, 1909.
Fellow in Economics.

Shafer, Samuel Robert, Hagerstown, Md., 109 P
A.B., Princeton University, 1912.
Class of 1873 Fellow in English Literature.

Shapley, Harlow, Jasper, Mo., Merwick
A.B., University of Missouri, 1910.
A.M., University of Missouri, 1911.
Charlotte Elizabeth Procter Fellow.

Shapley, John, Jasper, Mo., Merwick
A.B., University of Missouri, 1912.
Fellow in Archæology.

Small, Charles Russell, Harrisburg, Pa., 16 N W
A.B., Princeton University, 1910.
A.M., Princeton University, 1911.
Fellow in Classics.

Smith, Earl Baldwin, Brunswick, Me., Merwick
A.B., Bowdoin College, 1911.
A.M., Princeton University, 1912.
Fellow in Art and Archæology.

Stringfellow, Ervin E, Des Moines, Ia., 204 Nassau St.
A.B., Drake University, 1909.
A.M., Drake University, 1911.
Fellow in Classics.

Taylor, Guy Baker, Lexington, Ky., 6 Bank St.
B.S., State University of Kentucky, 1908.
M.S., State University of Kentucky, 1909.
Fellow in Chemistry.

Turner, John Roscoe, Ithaca, N. Y., 20 Bank St.
B.S., Ohio Northern University, 1900.
M.S., Ohio Northern University, 1903.
South East Club University Fellow in Social Science.

Van Wesep, Henry, Holland, Mich.,
A.B., University of Michigan, 1912. 36 Vandeventer Ave.
Fellow in Philosophy.

Ward, Carroll Raymond, Buckland, Mass., 204 Nassau St.
A.B., Dartmouth College, 1911.
A.M., Princeton University, 1912.
Fellow in Classics.

Warfield, William, Easton, Pa., Merwick
A.B., Lafayette College, 1911.
Fellow in Geology.

Williams, Arthur, Chicago, Ill., 16 Park Pl.
A.B., Northwestern University, 1910.
A.M., Northwestern University, 1911.
Fellow in Classics.

Graduate Scholars

Castle, Earl William, Ann Arbor, Mich., 75 U
A.B., University of Michigan, 1907.
A.M., University of Michigan, 1910.
Graduate Scholar in Mathematics.

Deferrari, Roy Joseph, Stoneham, Mass., 6 Bank St.
A.B., Dartmouth College, 1912.
Graduate Scholar in Classics.

DePorte, Joseph Vital, New York, N. Y., 36 Park Pl.
University of Oklahoma.
Graduate Scholar in Mathematics.

Flint, William Willard, Jr., Concord, N. H., 6 Bank St.
A.B., Dartmouth College, 1912.
Graduate Scholar in Classics.

Lester, Horace Hardy, Auraria, Ga., 190 Nassau St.
A.B., University of Minnesota, 1906.
A.M., Washington University, 1912.
James W. Queen Graduate Scholar.

Graduate Students

Allison, John Maudgridge Snowden, Pittsburg, Pa., 10 Nassau St.
A.B., Princeton University, 1910.

Baskerville, Robert Walter, Princeton, N. J., 15 Vandeventer Ave.
A.B., Princeton University, 1912.

Bicknell, Luther Moore, Turner, Ore., 13 A S
A.B., Park College, 1910.

Bradley, William Roy, Neosho Falls, Kan., 308 H S
A.B., Emporia College, 1912.

Browne, George Francis, Cincinnati, O., 31 A S
A.B., Wooster University, 1909.

Campbell, Alan Ditchfield, Jr., New Brunswick, N. J.,
A.B., Rutgers College, 1912. 108 Mercer St.

*Capps, Julian Huntley, Jacksonville, Ill., 47 N. Tulane St.
A.B., Illinois College, 1912.

Carlile, John Snyder, Brooklyn, N. Y., 20 A S
A.B., Park College, 1911.

Chaffee, Arthur Russell, Morristown, N. Y., 307 H S
A.B., Union College, 1910.

Claiborne, Robert Watson, Petersburg, Va., Merwick
A.B., University of Virginia, 1908.

Cohoon, James Wilfred, Birr, Ontario, Canada, 231 Nassau St.
A.B., University of Toronto, 1906.
A.M., University of Toronto, 1908.

Compton, Wilson Martindale, Wooster, O., Merwick
Ph.B., Wooster University, 1911.
Ph.M., Wooster University, 1912.

Conger, Alexander Millspaugh, Albany, N. Y., 4 A S
A.B., Rutgers College, 1910.

Cooke, Claud Hanbury, St. Louis, Mo., 3 A, H
Princeton University.

Curry, Albert Bruce, Jr., Memphis, Tenn., 215 H S
A.B., Davidson College, 1907.

*Dale, Julian Kalfus, Louisville, Ky., Cannon Club
A.B., Princeton University, 1911.

* Part Time Assistant.

*Dale, Nelson Clark, Pittsfield, Mass., 6 Bank St.
B.S., Middlebury College, 1903.
A.M., Brown University, 1909.

Dennis, Hebert Knight, Meadville, Pa., Hightstown, N. J.
Ph.B., Brown University, 1912.

Dodds, Harold Willis, Grove City, Pa., 44 A S
A.B., Grove City College, 1909.

*Eastman, Albert Sherman, Princeton, N. J., 26 Bank St.
B.S., University of Vermont, 1905.
M.S., University of Vermont, 1911.

Edwards, David Reed, Chatham, N. J., 24 A S
A.B., Lafayette College, 1909.
B.D., Princeton Theological Seminary, 1912.

Efird, Oscar Ogburn, Winston-Salem, N. C., 6 Bank St.
A.B., Roanoke College, 1912.

Elder, Earl Edgar, Albia, Ia., 42 A S
A.B., Monmouth College, 1908.

Franklin, Samuel Floyd, Wilmington, Del., 117 H S
A.B., Princeton University, 1912.

Garthwaite, George, Pennington, N. J., Pennington, N. J.
A.B., Oberlin College, 1908.

Ghiselin, Charles, Jr., Shepherdstown, W. Va., 27 B S
A.M., Washington & Lee University, 1912.

*Goss, Byron Cassius, Rochester, Ind., 26 Bank St.
A.B., Wabash College, 1912.

*Gould, Harley Nathan, West Springfield, Pa., 4 E B
A.B., Allegheny College, 1910.

Greene, Nelson Lewis, Hightstown, N. J., Hightstown, N. J.
A.B., Colgate University, 1901.
A.M., Princeton University, 1911.

Harrison, John DeHart, Norristown, Pa., Merwick
A.B., Princeton University, 1912.

Hartmann, Henry Michael, Philadelphia, Pa., 309 H S
A.B., Temple University, 1912.

Hellyer, Henry Leon, St. Louis, Mo., 45 A S
Ph.B., Westminster College, 1910.

Hertzog, Phares H., Ephrata, Pa., Hightstown, N. J.
B.S., Bucknell University, 1910.

---

* Part Time Assistant.

Hornbrook, George Lutz, Wheeling, W. Va., 168 Nassau St.
Litt.B., Princeton University, 1912.

Howard, Stanley Edwin, Springfield, Mass., 121 Broadmead
A.B., Bates College, 1910.

Hunter, Merlin Harold, Chandlersville, O., 47 N. Tulane St.
A.B., Muskingum College, 1912.

Ingram, James Eben, Tenaha, Tex., 215 H S
A.B., Austin College, 1909.

Irwin, John Henry, East Dowingtown, Pa., 103 H S
A.B., Park College, 1911.

Ishikawa, Tetsu, Mito, Ibaraki, Japan, 74 B S
A.B., Waseda University, 1907.

Jacobs, Melvin Clay, Hallam, Pa., 77 B S
A.B., Ursinus College, 1912.

Jamieson, Roy Wherry, Monmouth, Ill., 211 H S
A.B., Monmouth College, 1910.

*Jennings, Albert Eaton, Jr., Auburn, Me:, 32 Wiggins St.
B.S., Bates College, 1912.

Jordan, Walter Edward, Emporia, Va., 415 H S
A.B., Randolph-Macon College, 1912.

Kawakami, Isamu, Kanda, Tokyo, Japan, C, B S
A.B., Waseda University, 1908.

Kidd, William Cummings, Roslyn, Pa., 404 H S
A.B., Lafayette College, 1911.

Kircher, Carl Edward, Ellsworth, Kan., 207 H S
A.B., Park College, 1909.

Kishinami, Tsunezo, Yuno, Date, Iwashiro, Japan, 95 Mercer St.
A.B., Tohoku-Gakuin College, 1903.
A.M., Princeton University, 1911.

Koontz, Jacob Vanderbilt, Baltimore, Md., 302 H S
A.B., Lafayette College, 1912.

Larrick, Asa Richard, Chambersville, Va., 27 B S
A.B., Washington & Lee University, 1907.

Lemon, William Philip, Cardiff, Wales, 49 B S
A.B., Huron College, 1912.

Linn, John Sheridan, Paoli, Pa., 302 H S
A.B., Lafayette College, 1911.

* Part Time Assistant.

Lytle, James Pollock, Richmond, Kan., 44 B S
A.B., Monmouth College, 1912.

McCahon, George, Kilrea, Ireland, 300 H S
A.B., Lafayette College, 1911.

McConnell, James Chauncey, Grove City, Pa., 309 H S
A.B., Grove City College, 1911.

McLaughlin, Alvah Rufus, Dunmore, Pa., 20 B S
Ph.B., Lafayette College, 1909.

McCracken, William Henry, Neury, Ireland, 23 B S
A.B., Huron College, 1912.

Meeter, Harm Henry, Lansing, Ill., 16 A S
Christian Reform Theological Seminary.

Merriam, William Hartwell, Tarkio, Mo., 15 B S
A.B., Tarkio College, 1907.

Messler, Daniel Ivins, Hightstown, N. J., Hightstown, N. J.
A.B., Princeton University, 1908.
A.M., Princeton University, 1912.

Miller, Karl Palmer, Princeton, Ky., 315 H S
B.S., Hanover College, 1910.

*Mitman, Carl Weaver, S. Bethlehem, Pa., 36 Wiggins St.
A.B., Lehigh University, 1909.
E.M., Lehigh University, 1911.

Napp, James Elias, Kalamazoo, Mich., 317 H S
A.B., Kalamazoo College, 1908.

Offield, Robert Long, Brownsville, Tex., 213 H S
A.B., King College, 1905.
B.D., Austin Theological Seminary, 1909.

Ohno, Nao Chika, Tokyo, Japan, 55 B S
A.B., Maiji Gakuin College, 1905.

Othen, Richard Charles Theodore, Colombo, Ceylon, 107 H S
Richmond College, Ceylon, 1901.

*Parker, Harrison Oaks, Georgetown, Ill., 18 Madison St.
A.B., Wabash College, 1911.

Patterson, Charles Bernard, China Grove, N. C., 6 Bank St.
A.B., Roanoke College, 1911.
A.M., Roanoke College, 1911.

Perry, Ralph Foster, Fairfax, Vt., Pennington, N. J.
A.B., University of Vermont, 1906.

* Part Time Assistant.

Peters, John Brandon, Emporia, Va., 415 H S
A.B., Richmond College, 1909.

Plaxco, Moffatt Ross, Brighton, Tenn., 34 B S
A.B., Erskine College, 1910.

Pomeroy, Ralph Brouwer, Princeton, N. J., 10 Nassau St.
A.B., Columbia University, 1898.
B.D., General Theological Seminary, 1903.

Porter, Eliot, Topeka, Kan., 115 H S
A.B., University of Kansas, 1911.

Reeves, Jacob Walter, Fairmont, W. V., Hightstown, N. J.
B.S., University of Wooster, 1911.
B.O., Emerson College of Oratory.

*Reeves, Prentice, Joplin, Mo., 18 Madison St.
A.B., University of Missouri, 1912.

Richardson, Frank Mackey, Sherman, Tex., 31 Edwards Pl.
Austin College.

Robertson, Gilbert Stuart, Princeton, N. J., 12 Maple St.
A.B., Princeton University, 1912.

Robinson, Robert Hunter, Tacoma, Wash., 42 A S
A.B., Monmouth College, 1911.

Ross, John Elliott, Smith Center, Kan., 308 H S
A.B., Emporia College, 1912.

Russell, Robert McWatty, Jr., New Wilmington, Pa., 11 A S
A.B., Westminster College, 1911.

*Sawyer, Herbert Leslie, Madison, Me., Jefferson Rd.
A.B., Bates College, 1908.

Sayre, James Frank, Randolph, Pa., 14 Park Pl.
A.B., Allegheny College, 1911.

Schenck, Charles Frederick, Springfield, N. Y., 25 M D
Princeton University.

Shear, Hiram Ray, Putnam, N. Y., 202 H S
A.B., Westminster College, 1911.

Sheppard, Albert Samuel, Castleton Cardiff, So. Wales, 29 B S
A.B., Huron College, 1911.

Stavig, Edwin Odin, Sisseton, S. Dak., 204 Nassau St.
A.B., St. Olaf College, 1912.

* Part Time Assistant.

Stephens, Llewellyn Walter, Brooklyn, N. Y., 37 B S
A.B., Princeton University, 1910.
A.M., Princeton University, 1912.

Stetson, John Minor, New Haven, Conn., 16 Bank St.
A.B., Yale University, 1909.

Stewart, William, Oxford, Pa., 3 A S
A.B., Princeton University, 1909.
B.D., Princeton Theological Seminary, 1912.

Stover, James Duckworth, Milford, N. J., 10 N R
Princeton University.

Stukes, Samuel Guerry, Manning, S. C., 21 A S
A.B., Davidson College, 1908.
A.M., Princeton University, 1910.

*Swanson, Arthur André, Lakewood, N. Y., 229 Nassau St.
B.S., Allegheny College, 1911.
M.S., Allegheny College, 1912.

Thomson, Frederick Clifton, Los Angeles, Cal., 29 A S
A.B., Occidental College, 1910.

Voris, Paul Culbertson, Madison, Ind., 315 H S
A.B., Hanover College, 1911.

*Wardwell, Edward Howland, Jr., New Canaan, Conn.,
B.S., Princeton University, 1911. 19 Linden Lane

Ware, Moses Weld, Princeton, N. J., 12 Edgehill St.
A.B., Harvard University, 1902.

Watson, William Charles, Watertown, N. Y., 405 H S
Lafayette College.

Watt, James, Lancaster, Pa., 42 A S
A.B., Franklin & Marshall College, 1910.

West, Randolph, Princeton, N. J., Merwick
A.B., Princeton University, 1912.

Weston, Karl Ephraim, Williamstown, Mass., Nassau Club
A.B., Williams College, 1896.
A.M., Williams College, 1898.

Wichers, John, Zeeland, Mich., 413 H S
A.B., Hope College, 1910.

* Part Time Assistant.

Williamson, Adam Cluness, Brockton, Mass., 202 H S
A.B., Westminster College, 1911.
A.M., Westminster College, 1911.

Fellows	42
Graduate Scholars	5
*Part Time Assistants	13
Other Graduate Students	88
	148

Students in the School of Electrical Engineering

Second Year

Eves, William, III, Wilmington, Del., 6 S M R
B.S., Princeton University, 1911.

Roche, Robert Thiery, East Orange, N. J., 13 N D
C.E., Princeton University, 1911.

Simons, Donald MacLaren, Elizabeth, N. J., 7-10 S E
A.B., Princeton University, 1911.

First Year

Gosnell, Harpur Allen, Baltimore, Md., 185 L
A.B., Princeton University, 1912.

Kieffer, Ralph Jacob, Katrine, N. Y., 60 Univ. Pl.
B.S., Rutgers College, 1912.

McLanahan, Allen, Princeton, N. J., 8 Dickinson St.
B.S., Princeton University, 1912.
Sayre Fellow in Applied Electricity.

Ohashi, Yasu-Saburo, Tokyo, Japan, 165 Nassau St.

Platt, Horace, Brooklyn, N. Y., 185 L
C.E., Princeton University, 1912.

Stanford, Paul Dudley, Palmyra, Mo., 16 Park Pl.
A.B., University of Missouri, 1912.
Orson Desaix Munn Fellow in Electrical Engineering.

Williams, Samuel Baker, Newport, R. I., 5 S W
Litt.B., Princeton University, 1912.

---

*Pennypacker, John Griffen, Phoenixville, Pa., 12 S E
C.E., Princeton University, 1912.

Students in the School of Electrical Engineering....11

*Not candidate for a degree.

UNDERGRADUATES

SENIOR CLASS, 1913

CANDIDATES FOR THE A.B. DEGREE

Adams, Purser Elder,	New York, N. Y.,	11 L P
Adams, Robert McCormick, Jr.,	Webster Groves, Mo.,	11 N D
†Annin, Robert Ogden,	Washington, D. C.	29 Bank St.
Atwood, Frederick Harman,	Pittsburg, Pa.,	5 S W B
Bagby, Thomas English,	Baltimore, Md.,	3 E B
Baker, Charles Dabney,	New York, N. Y.,	42 '79 H
Baker, Daniel, Jr.,	Baltimore, Md.,	3 N D
Baker, Lawrence Adams,	Washington, D. C.,	8 B, H
Baldwin, Robert Dodge,	New York, N. Y.,	3 S R
Bechtel, Erden Charles,	East Berlin, Pa.,	1 N M R
Bell, Samuel Dennis,	Yonkers, N. Y.,	42 '79 H
Berky, Herbert Weller,	Clayton, Pa.,	3 S R
†Berry, Allen Douglas,	Nashville, Tenn.,	72 P
Bickel, William Forman,	Pittsburg, Pa.,	123 H
Bickham, William Denison,	Dayton, Ohio,	54 L
Bingham, Charles Edward,	Brooklyn, N. Y.,	18 S W
Boughner, James Kerfoot,	Denver, Col.,	5 N M R
Bouton, Gladwin,	Bloomfield, N. J.,	5 S D
Brown, Milton McIntyre,	Glendale, Ohio,	12 A, H
Brown, Wendell Wheeler,	Yonkers, N. Y.,	6 N W
Bryan, Alison Reid,	Chicago, Ill.,	3 W B
Calhoun, Benjamin Allen,	Houston, Texas,	5 W M W
†Callery, William,	Pittsburg, Pa.,	9 B
Coffin, Philip Littlejohn,	New York, N. Y.,	15 N M R
Coleman, George Dawson,	Lebanon, Pa.,	64 '79 H
†Cooke, Claud Hanbury,	St. Louis, Mo.,	3 A, H
Cooledge, Norman Peeples,	Atlanta, Ga.,	9 E B
Cornelius, Charles Over,	Sewickley, Pa.,	162 L
Cowen, Edwin Alfred,	New York, N. Y.,	22 L
Critchlow, Maurice Martin,	Salt Lake City, Utah,	6 E M W

† Candidate for degree in February, 1913.

Curtis, Arthur Pierson,	Brooklyn, N. Y.,	18 N W
Danser, Willard Stanley,	Trenton, N. J.,	43 B S
Davison, Wilburt Cornell,	Brooklyn, N. Y.,	5 W M W
Dickey, William Hamilton,	Cleveland, Ohio,	15 C
Donaldson, Bruce McNaughton,	Detroit, Mich.,	3 E B
Douglass, Earl Leroy,	McKeesport, Pa.,	9 W B
Eberstadt, Ferdinand,	East Orange, N. J.,	24 S E
Farr, Francis Shelton,	New York, N. Y.,	13 '79 H
Forbes, Gilbert,	New York, N. Y.,	34 L
Fox, Arthur Eugene,	Harrisburg, Pa.,	3 W B
Frazier, Edwin Ray,	Norwalk, Ohio,	1 N D
Furman, John Applegate, Jr.,	Newark, N. J.,	2 A, H'm
Gaston, George Houston, Jr.,	New York, N. Y.,	301 H'm
Gatch, Loren Greeno,	Cincinnati, Ohio,	31 H
Geiger, Harvey,	Germantown, Pa.,	65 C
Gilmore, John Alexander,	Overbrook, Pa.,	45 U
Gilmour, William Rodger,	Frankford, Pa.,	17 W W
Gorham, James Henry,	New York, N. Y.,	3 B, H
†Green, Harrington,	Cincinnati, Ohio,	8 S R
Green, Robert Morris,	Cincinnati, Ohio,	12 A, H
Groff, Alden Donnelly,	Harrisburg, Pa.,	17 N W
Grundy, James Caldwell,	Lebanon, Ky.,	92 B
Hackney, Henry Eastman,	Uniontown, Pa.,	4 S E
Hall, Walter Brand,	Brooklyn, N. Y.,	61 B
Handy, Truman Parker,	New York, N. Y.,	54 '79 H
Harland, James Penrose,	Philadelphia, Pa.,	5 S E
Harlow, Alfred Gibbs,	Sewickley, Pa.,	15 L P
Hastings, Henry Winthrop,	Portland, Ore.,	132 H
Hastings, Warren,	Elizabeth, N. J.,	17 N E
‡Hawkins, John Cameron,	Philadelphia, Pa.,	33 L
Hawley, Dudley Allen,	Pomona, Cal.,	22 N E
Hay, Arthur Woodhull,	New York, N. Y.,	7 S W
Henderson, Thomas Watt,	Uniontown, Pa.,	3 S E
Hendrickson, Robert Scovel,	Lawrenceville, N. J.,	11 M D
Henry, David Reeves,	Philadelphia, Pa.,	5 U P
Hidden, Irad Morton,	Newark, N. J.,	84 H
Hinchliffe, John Darnley,	Paterson, N. J.,	71 B
Holsapple, Ralph Tilden,	Hudson, N. Y.,	132 H

† Candidate for degree in February, 1913.
‡ Candidate for degree in February, 1914.

Hoopes, Raymond Talmage,	Wilmington, Del.,	5 W B
Hornor, Sidney Henry,	Helena, Ark.,	162 L
Howard, Kenneth,	New York, N. Y.,	171 L
Hunter, Alexander Hays,	Pittsburg, Pa.,	123 H
‡Jackson, Robert Macauley,	New York, N. Y.,	24 H'm
Jones, DeWitt Clinton, III,	Elizabeth, N. J.,	84 H
Kimball, Charles Edmunds, Jr.,	New York, N. Y.,	131 H
Kinnan, Morris Egenton,	New York, N. Y.,	63 H
Kirk, Robert Hutchinson, Jr.,	McKeesport, Pa.,	5 W B
Knott, Joseph Proctor, Jr.	Lebanon, Ky.,	92 B
Knox, Cornelius Van Santvoord,	New Brunswick, N. J.,	7 E W
Landis, Wilmer,	Quakertown, Pa.,	39 U
Larkin, John Adrian,	New York, N. Y.,	24 '79 H
Law, Edward,	St. Davids, Pa.,	64 '79 H
†Lawrence, Robert Rutherfurd,	New York, N. Y.,	7 S M R
Lee, Robert Church,	Rochester, N. Y.,	63 '79 H
‡Logan, William John,	Brooklyn, N. Y.,	1 W W
Lowthorp, Francis Cowlyn, III,	Trenton, N. J.,	43 P
Lukens, Alan Wood,	Haverford, Pa.,	13 B
‡Lytle, Richard Ridgely, Jr.,	New York, N. Y.,	17 N E
Mack, Edward, Jr.,	Cincinnati, Ohio,	33 N E
McKittrick, Seward	St. Louis, Mo.,	14 W W
McMillan, Thomas Murphy, Jr.,	Mobile, Ala.,	5 M D
Marling, Francis Henry,	Montclair, N. J.,	41 L
‡Mathis, Robert Jennings,	Chicago, Ill.,	33 H
Matthews, Stanley,	Cincinnati, Ohio,	14 H'm
Merrifield, Clifford Schuyler,	New York, N. Y.,	13 A, H
Michael, Benjamin Rodney,	East Orange, N. J.,	104 H
Miller, John Atherton,	Louisville, Ky.	121 L
Mitchell, Clarence Van Schaick,	Bernardsville, N. J.,	3 L P
Moffat, Stanley Matthews,	Yonkers, N. Y.,	13 A, H
Montgomery, John Rhea,	Trenton, N. J.,	3 S D
Morgan, George Orlando, Jr.,	Shields, Pa.,	134 H
Morgan, Sherley Warner,	Cincinnati, Ohio,	14 H'm
Morrell, Franklin Wallace,	Elizabeth, N. J.,	20 N E
Myers, Paul Forest,	Dillsburg, Pa.,	33 C
Norman, William Henderson,	New Orleans, La.,	23 S E
O'Donohue, Henry Bruner,	New York, N. Y.,	A, B
Patterson, Robert Wilson, Jr.,	Pittsburg, Pa.,	24 '79 H

† Candidate for degree in February, 1913.
‡ Candidate for degree in February, 1914.

Pendleton, Talbot Taylor,	Berkeley Springs, W. Va.,	10 E B
‡Rich, John Jacob,	Harrisburg, Pa.,	32 S E
Richards, Lloyd,	New York, N. Y.,	54 '79 H
Richardson, Albert Starnes,	Murfreesboro, Tenn.,	13 S W
Rose, James McKinley,	Mercersburg, Pa.,	3 S M R
Roy, Donald Macgregor,	Brooklyn, N. Y.,	7 S W
†Schenck, Charles Frederick,	Springfield, N. Y.,	25 M D
Schenck, Warne Phillips,	Princeton, N. J.,	Princeton, N. J.
Scribner, Charles, Jr.,	New York, N. Y.,	3 L P
Scribner, George Kline,	Boonton, N. J.,	102 B
Scudder, Galen Fisher,	Glastonbury, Conn.,	6 N W
Seggerman, Kenneth Mather,	New York, N. Y.,	121 L
†Semmes, Raphael,	Baltimore, Md.,	44 '79 H
Shand, James, Jr.,	Lancaster, Pa.,	24 H'm
Silvester, Lionel Valdemar,	Princeton, N. J.,	19 S M R
Simons, John Farr,	Elizabeth, N. J.,	29 S E
Smith, Arthur Delafield,	Monterey, Mass.,	15 N E
Smith, Joseph Lyndon,	Newark, N. J.,	2 B
Speir, Francis Cecil,	South Orange, N. J.,	64 C
Steele, Robert Wilbur, Jr.,	Denver, Col.,	11 W B
†Stokes, Thomas Ormsby,	Nashville, Tenn.,	53 Park Pl.
†Stover, James Duckworth,	Milford, N. J.,	10 N R
‡Suydam, Henry West,	Brooklyn, N. Y.,	27 M D
Taylor, Warren Swan,	Shade Gap, Pa.,	9 W B
Thomas, Rupert Broas, Jr.,	Flushing, N. Y.,	2 B
Traub, Victor Augustus,	Media, Pa.,	Murray-Dodge
Trowbridge, Arthur Lusk,	New York, N. Y.,	83 P
Troyer, Jacob Neuhauser,	Bird-in-Hand, Pa.,	31 S E
Van Vliet, Benjamin Franklin,	Shrewsbury, N. J.,	105 H
Waterman, Alan Tower,	Northampton, Mass.,	18 N W
Wensley, William Richardson,	East Cleveland, Ohio,	5 N D
Whipple, Thomas King,	Kansas City, Mo.,	32 L
Whitaker, George Parks,	Wheeling, W. Va.,	82 H
White, Norton Rugee,	Grand Rapids, Mich.,	64 H
Wight, Goulding Kumber,	Montclair, N. J.,	91 H
‡Williams, Robert Blockwood,	Summit, N. J.,	24 L
Wisner, George Talman,	Summit, N. J.,	53 H
Worthington, Frank Dallain,	Bel Air, Md.,	9 E B

A.B. SENIORS.....145

† Candidate for degree in February, 1913.
‡ Candidate for degree in February, 1914.

CANDIDATES FOR THE LITT.B. DEGREE

Adams, Frank Dennette,	Washington, D. C.,	3 N D
Baker, William Mumford,	New York, N. Y.,	134 L
Bartlett, John Kemp, Jr.,	Baltimore, Md.,	91 H
Bashinsky, Leo E.,	Troy, Ala.,	20 M D
†Belknap, Maitland,	New York, N. Y.,	44 '79 H
Bell, James Francis, Jr.,	Portland, Ore.,	5 E W
Binns, Ralph Holden, Jr.,	Pittsburg, Pa.,	60 P
Bissell, George Norman,	Newark, N. J.,	70 P
Bluethenthal, Arthur,	Wilmington, N. C.,	11 S D
Bonnell, Ward Louis,	East Orange, N. J.,	1 W M W
Boon, Walter Roy,	Pittsburg, Pa.,	1 W M W
Buck, Joseph Wallace,	Elmira, N. Y.,	1 B
Chaplin, Maxwell,	Ridgewood, N. J.,	171 L
Chester, William Merrill,	New York, N. Y.,	7 S E
‡Christie, John Reid, Jr.,	Paris, France,	28 S E
Class, Theodore Sherman,	Westfield, N. J.,	32 P
Cooper, Alfred Wesley,	Newark, N. J.,	107 P
Cowan, Stuart DuBois,	Rye, N. Y.,	41 H
‡Currier, John Ritchie,	Newark, N. J.,	3 S D
de la Reussille, Leon Edward, Jr.,	Red Bank, N. J.,	3 B, H
Dixon, Max Müller,	Washington, D. C.,	6 E M W
Fauntleroy, Gordon Robinson,	Geneva, Ill.,	15 L P
Ferris, Laurence,	New York, N. Y.,	76 H
Fish, Raymond Treadwell,	New York, N. Y.,	71 H
Fisher, David Kirkpatrick Este, Jr.,	Ruxton, Md.,	82 H
Forbes, Howell,	Morristown, N. J.,	131 H
Ford, Edwin Shepard,	Morristown, N. J.,	14 N W
Ford, Franklin,	Princeton, N. J.,	Cleveland Lane
Frantz, Jacob Harold,	New Rochelle, N. Y.,	111 L
Fullerton, Donald Bertram,	Plainfield, N. J.,	8 W M W
†Gough, Richard Sidney,	Plainfield, N. J.,	142 H
Griggs, Gilbert Snowden,	Somerville, N. J.,	13 B
Hagar, Arthur Freeman,	Germantown, Pa.,	32 B
Hall, Francis Cooley,	Brookline, Mass.,	33 C
Harrington, Burritt Clark,	Weedsport, N. Y.,	22 N E
†Harris, Basil,	Irvington-on-Hudson, N. Y.,	9 B
Hendel, Charles William, Jr.,	Reading, Pa.,	4 W B

† Candidate for degree in February, 1913.
‡ Candidate for degree in February, 1914.

Hildreth, Leon Pelletreau,	Southampton, N. Y.,	17 N W
‡Hoffman, Wilmer,	Baltimore, Md.,	11 '79 H
Horne, William Dodge, Jr.,	Yonkers, N. Y.,	4 A, H
Howell, Lawrence Day,	Philadelphia, Pa.,	7 W M W
John, Leonard Lyons,	Overbrook, Pa.,	38 L
†Jones, Carl Waring,	Minneapolis, Minn.,	142 H
Jordan, Robert, Jr.,	Port Jervis, N. Y.,	33 H
‡Kellett, William Wallace,	Philadelphia, Pa.,	17 M D
Kenyon, George Ross,	New York, N. Y.,	104 B
Kingsford, Irving Bowdoin,	Short Hills, N. J.,	11 '79 H
Lingle, Roy Petran,	Philadelphia, Pa.,	12 S E B
Lockwood, Ralph Greene,	Indianapolis, Ind.,	94 H
Loeb, Harold Albert,	New York, N. Y.,	152 L
McCoy, Joseph Chrisman,	Kansas City, Mo.,	13 P
McKee, Rowland Hughes,	Dayton, Ohio,	63 H
McLean, Robert,	Philadelphia, Pa.,	2 W B
Magill, William Harry,	Fargo, N. D.,	32 P
Markham, Samuel Shepherd,	Dayton, Ohio,	9 N E
Mathiasen, Karl, Jr.,	Keyport, N. J.,	7 W M W
Mautner, Bertram Hirsch,	New York, N. Y.,	26 M D
Meyers, Wallace Edwin,	New York, N. Y.,	26 M D
Miller, Daniel Yeakel,	Philadelphia, Pa.,	13 P
Morris, S. Wells,	St. Louis, Mo.,	44 H
Mulford, Elmer Sidway,	Greenwich, Conn.,	104 B
Mulford, Stanley Riggs,	Camden, N. J.,	32 B
Nebeker, Charles Morehead,	Santa Monica, Cal.,	45 U
Neustadt, Maurice Walter,	Chappaqua, N. Y.,	114 B
North, John Spring,	Philadelphia, Pa.,	5 L P
Norton, Percy Dunbar,	Tacoma, Wash.,	4 A, H
Ober, Robert,	Baltimore, Md.,	51 '79 H
O'Connor Hugh,	New York, N. Y.,	83 P
Oliver, Alfred Cookman, Jr.,	Island Heights, N. J.,	36 Bank St.
Orth, Charles Daniel, Jr.,	New York, N. Y.,	54 L
Paine, Albert Ignatius,	New York, N. Y.,	52 H
Parsons, Joseph Henry,	Waterford, N. Y.,	38 L
Penfield, Wilder Graves,	Hudson, Wis.,	8 S E
‡Perkins, Clarence Basil,	Denver, Colo.,	2 W M W
Piel, Robert,	New York, N. Y.,	44 H

† Candidate for degree in February, 1913.
‡ Candidate for degree in February, 1914.

Rauch, Rudolph Stewart,	New York, N. Y.,	5 L P
Raymond, Howard Cook,	Franklin, N. Y.,	3 W W
Read, Malcolm Everett,	Pawtucket, R. I.,	2 W B
Reese, Hubert Kearsley,	Memphis, Tenn.,	26 S E
Rheem, Edmund Domer,	Washington, D. C.,	52 H
Richardson, Peter,	Tacoma, Wash.,	65 H
Robertson, Donald John Cochran,	Brooklyn, N. Y.,	154 L
Robinson, Richard Everts,	Harrisburg, Pa.,	12 H
Rogers, Eugene Arthur,	Hightstown, N. J.,	24 N E
Ross, Reuben James,	New York, N. Y.,	2 S W B
Rothschild, Walter Nathan,	Brooklyn, N. Y.,	4 L P
Rowley, James Bennett,	Middletown, N. Y.,	9 W M W
Rutter, Thomas Renaud,	NewYork, N. Y.,	65 H
Sealy, Robert,	Galveston, Texas	94 H
Selby, John Alvan,	Snow Hill, Md.,	8 B, H
Simpson, Edward Ridgely,	Baltimore, Md.,	2 S W B
Smith, Karl Beckwith,	New York, N. Y.,	13 '79 H
Smith, Warren Ridgeway,	Paterson, N. J.,	27 S E
Stickney, Laurence Charles,	Englewood, N. J.,	21 N E
Story, William Clinton,	Freeport, N. Y.,	70 P
Straus, Roger William,	New York, N. Y.,	63 L
Sullivan, Arthur James,	Passaic, N. J.,	16 N E
†Swift, James Alcorn,	Memphis, Tenn.,	72 P
Tilton, John Kenneth,	Springfield, Ohio,	52 L
Todd, William Newell,	Piqua, Ohio,	31 H
Turner, Paul DeWitt,	West Philadelphia, Pa.,	22 M D
‡Vasbinder, John Wesley,	Blairstown, N.J.,	11 N E
Vreeland, Hamilton, Jr.,	Jersey City, N. J.,	6 A, C
Wallace, Robert Cunningham,	New Castle, Pa.,	71 L
Warner, Rawleigh,	Evanston, Ill.,	41 L
Watrous, John Herbert,	Seattle, Wash.,	3 C, H'm
Weil, Ferdinand Theobald,	Pittsburg, Pa.,	104 H
Weir, Norman Davidson,	Brooklyn, N. Y.,	12 '79 H
†Wilkin, John Hurst,	Baltimore, Md.,	116 B
Wilson, Thomas Albert,	Binghamton, N. Y.,	11 S D
Wolfe, William Barnet,	Pittsburg, Pa.,	63 '79 H

LITT.B. SENIORS.....111

† Candidate for degree in February, 1913.
‡ Candidate for degree in February, 1914.

CANDIDATES FOR THE B.S. DEGREE

Applegate, Edwin Golding,	Trenton, N. J.,	Trenton, N. J.
Barnett, William L'Engle,	Jacksonville, Fla.,	12 '79 H
Buchanan, Edwin Porter,	Pittsburg, Pa.,	13 S W
Close, Frank Dolbeare,	Cambridge, Mass.	52 P
Cook, Archibald Maclean	Renovo, Pa.,	17 S E
†Davis, William Faber,	Orange, N. J.,	13 S E
Dewey, Henry Laidlaw,	New York, N. Y.,	9 N E
Dunlap, Charles Cornell,	Elizabeth, N. J.,	5 M D
Furman, Nathaniel Howell,	Lawrenceville, N. J.,	1 W B
Gordon, Newell Trimble,	Boonton, N. J.,	102 B
Goslyne, Donald Stevenson,	Bell Vernon, Pa.,	23 N E
Harrop, Alexander,	Montclair, N. J.,	9 S D
Hazard, Harry Williams, Jr.,	Richmond, Va.,	2 C, H
†Heck, Edson Burr,	Jersey City, N. J.,	2 W M W
Howell, Benjamin Franklin, Jr.,	Boonton, N. J.,	14 N W
Ill, Edmund Waldmar,	Newark, N. J.,	15 B
Mabon, Thomas McCance,	Pittsburg, Pa.,	5 S W B
Marlatt, Clyde Douglas,	Newark, N. J.,	9 W M W
Nimick, Francis Bailey,	Pittsburg, Pa.,	60 P
O'Donnell, Ottomar,	Denver, Col.,	2 C, H
Phillips, Francis Theodore,	Brooklyn, N. Y.,	8 A, H
Randolph, Alan Fitz,	Plainfield, N. J.,	8 W M W
Riker, Carleton Berrian,	Maplewood, N. J.,	97 B
Ross, Henry Mitchell,	Asbury Park, N. J.,	11 N W
Smith, Donald Jerome,	Brooklyn, N. Y.,	8 A, H
Spencer, Lane Hart,	South Orange, N. J.,	71 B
Staehle, Richard Henry,	Newark, N. J.,	30 P
Walker, John Nicolai Tilemann,	Carnegie, Pa.,	71 H
Washburn, Fred Cole,	Hackensack, N. J.,	41 H

B.S. SENIORS.....29

CANDIDATES FOR THE C.E. DEGREE.

Auger, Charles Louis, Jr.,	Ridgewood, N. J.,	22 S E
Baiter, Roland William,	Bayshore, N. Y.,	13 N E
Benton, Herbert George	Brooklyn, N. Y.,	142 L
Bolmer, Maurice Theodoret,	Rocky Hill, N. J.,	30 N E
Bonner, Albert Sydney,	Chicago, Ill.,	62 H
Brewster, Wrestling Cabot,	Elizabeth, N. J.,	20 N E

† Candidate for degree in February 1913.

Bryan, Gray MacWhorter,	New York, N. Y.,	11 L P
Condit, Kenneth Hamilton,	East Orange, N. J.,	14 S E
Coxe, Wallace Hammond,	Wilmington, Del.,	12 H
Crooks, Porter Kenneth,	Paterson, N. J.,	15 N W
Earle, Harold Baldwin,	Newark, N. J.,	10 N E
Erben, Philip van Rensselaer,	Radnor, Pa.,	9 N M R
Fowler, James Wilford,	Hackettstown, N. J.,	28 N E
Gleason, John Shriver,	Philadelphia, Pa.,	103 B
Hutchinson, Laurence Willis,	Trenton, N. J.,	6 A, C
Hutton, John Laurence,	New York, N. Y.,	7 S E
Jarvis, Van Buren,	Indianapolis, Ind.,	12 N E
Johnson, Courtney William,	Chicago, Ill.,	31 L
Lowe, Malcolm Branson,	Tenafly, N. J.,	97 B
Lowman, Edward Louis,	Lowman, N. Y.,	103 B
Lynch, John Bernard,	Naugatuck, Conn.,	26 Witherspoon St.
McWilliams, John Probasco,	Cleveland, Ohio,	15 C
Page, Edward Crozer,	Philadelphia, Pa.,	A, B
Page, Louis Rodman, Jr.,	Philadelphia, Pa.,	A, B
Semple, James Reid,	Sebree, Ky.,	15 N W
Sullivan, John Joseph, Jr.,	Bangor, Me.,	45 U
Van Cleve, Russell Leicher,	Princeton, N. J.,	162 Nassau St.

C. E. SENIORS.....27

JUNIOR CLASS, 1914

CANDIDATES FOR THE A.B. DEGREE

Adler, Julius Ochs,	Chattanooga, Tenn.,	62 B
Agar, John Girard, Jr.,	New Rochelle, N. Y.,	84 P
Alexander, John Macmillan,	Jackson, Miss.,	5 E M W
Andrews, Jerome Edson,	Chicago, Ill.,	306 H
Armour, William,	Princeton, N. J.,	14 C
Bakewell, Allan Campbell, Jr.,	New York, N. Y.,	43 L
Bannerman, Elwood Parry,	Hempstead, N. Y.,	36 P
Barras, William Avery,	Trenton, N. J.,	32 N E
Bauhahn, Rolf William,	Jersey City, N. J.,	138 Nassau St.
Biswanger, Benjamin Erhard,	Philadelphia, Pa.,	18 E W
Blackburn, James Breckenridge,	Pittsburg, Pa.,	74 H
Blair, Joseph Paxton, Jr.,	New Orleans, La.,	112 B
Bleecker, Benjamin DeWitt,	Princeton, N. J.,	3 S E B
Boldt, Hermann St. John, Jr.,	New York, N. Y.,	13 U P

*Brinton, Wilmer, Jr.,	Baltimore, Md.,	32 H
Brooks, Oliver Russell,	Elizabeth, N. J.,	4 E M W
Brown, Benjamin Beuhring,	Charleston, W. Va.,	65 B
Bullock, Ralph Adams,	Cohoes, N. Y.,	33 S E
Bunn, Charles,	St. Paul, Minn.,	8 W B
Burrill, Drayton, Jr.,	New York, N. Y.,	22 H'm
Carpenter, Rolla Louis,	Detroit, Mich.,	7 B, H
Carter, Henry Alpheus Pierce,	Albany, N. Y.,	153 L
Church, Richard Newton Loomis,	New York, N. Y.,	186 L
Colt, John Milton,	Baltimore, Md.,	17 S W
Cook, Lucius Moore,	Ilion, N. Y.,	94 P
Cross, Eben Jackson Dickey, Jr.,	Baltimore, Md.,	43 '79 H
Cull, Severn Teackle Wallis,	Baltimore, Md.,	53 P
Curtis, Ralph Raymond,	Brooklyn, N. Y.,	62 Hodge Rd.
Day, Edgar Mortimer,	Pittsburg, Pa.,	3 S E B
Dexter, Allan Latham,	Boston, Mass.,	12 W B
Disbrow, Francis Nott,	Morristown, N. J.,	84 B
Dixon, Thomas, Jr.,	New York, N. Y.,	9 E M W
Downs, Irvin Reed,	Brooklyn, N.Y.,	111 B
DuBarry, Joseph Napoleon, 3d,	Philadelphia, Pa.,	52 C
DuBois, Robert Jacob,	Jersey City, N. J.,	19 N W
Dulles, Allen Welsh,	Auburn, N. Y.,	17 S W
*Durflinger, Clarence Wesley,	London, Ohio,	60 U
Emmons, Thornton,	Princeton, N. J.,	153 L
Enck, Warren Kline,	Lexington, Pa.,	6 M D
Gatch, John Newton,	Cincinnati, Ohio,	91 B
Gill, Donald Lee,	Brooklyn, N. Y.,	61 L
Goodwin, Daniel Rodman,	Philadelphia, Pa.,	9 S R
Harris, George Ellsworth, Jr.,	Montclair, N. J.,	111 L
Hartman, John Ives,	Lancaster, Pa.,	32 '79 H
Heyl, John Bernard,	Wynnewood, Pa.,	132 L
Hillhouse, Julian Griswold,	Yonkers, N. Y.,	94 P
*Hillyer, Lewis Annan,	Port Richmond, N. Y.,	10 N R
Hogg, Theodore Bosler,	Pittsburg, Pa.,	41 P
Hunter, James Boyd, Jr.,	Jersey City, N. J.,	C, E B
Hunter, Joseph Fisher,	Pittsburg, Pa.,	12 C
Jewett, John Hill, Jr.,	Plainfield, N. J.,	4 W W
Kellogg, Paul Vincent,	Columbus, Ohio,	5 S R
Klipstein, Gerald Philip,	East Orange, N. J.,	44 B
Laskin, Benjamin,	Philadelphia, Pa.,	5 S M R
Loveland, Ernest Kenneth,	Moscow, Pa.,	92 P

* Candidate for degree in February, 1915.

Lynd, Robert Browning,	Louisville, Ky.,	7 A, H
McLean, James,	Brooklyn, N. Y.,	53 B
McPherson, Paul Crerar,	Lawrenceville, N. J.,	17 B
Mayer, William Frederick,	Johnstown, Pa.,	62 L
*Mertz, Edward Hine,	Washington, D. C.,	23 Edwards Pl.
Middleton, William Sherk,	Harrisburg, Pa.,	16 L
Mierow, Herbert Edward,	Lakewood, N. J.,	29 N E
Miller, Shackelford, Jr.,	Louisville, Ky.,	33 '79 H
Milliken, Robert Addison	Indianapolis, Ind.,	91 B
Moore, Christian Earl,	Bryn Mawr, Pa.,	84 B
Moore, Kenneth Willoughby,	Auburn, N. Y.,	9 S R
Morrisey, Charles William,	Keansburg, N. J.,	13 S D
Muehleck, George Ernest,	Hoboken, N. J.,	6 S R
Muller, Edwin, Jr.,	Lexington, Ky.,	7 A, H
Myers, William Blount,	Tallahassee, Fla.,	9 E M W
Nesbitt, Ralph Beryl,	Tunnelton, Pa.,	12 N D
Norton, Warren Smith,	Albion, N. Y.,	4 S W B
O'Connell, John Harlin,	Passaic, N. J.,	36 L
Phillips, George Felter,	Newark, N. J.,	23 L
Pierson, Richard Norris,	Stamford, Conn.,	14 '79 H
Pitney, Guy Shelton,	Morristown, N. J.,	14 '79 H
Pitney, John Ballantine,	Morristown, N. J.,	52 '79 H
Plimpton, Russell Arthur,	Hollis, N. Y.,	4 S R
Puttkammer, Ernst Wilfred,	Chicago, Ill.,	92 P
Pyne, Herbert Rivington,	New York, N. Y.,	27 C
Riker, Adrian, Jr.,	Newark, N. Y.,	32 '79 H
Roberts, William Paxton,	Wynnewood, Pa.,	31 '79 H
Robinson, Alexander Cochrane, III,	Sewickley, Pa.,	4 S R
Robinson, Thomas Hastings,	Lawrenceville, N, J.	17 B
Rogers, Norman Tallman,	Trenton, N. J.,	1 E M W
Schmidt, John Bennett,	Naugatuck, Conn.,	12 S D
Sherrard, Joseph Berry,	Grosse Pointe Farms, Mich.,	2 E W
Spencer, Marcus Acheson,	Pittsburg, Pa.,	51 L
Stearns, John Noble, III,	New York, N. Y.,	52 '79 H
Strebel, George Edmund,	Brooklyn, N. Y.,	81 B
*Tatnall, Henry Chase,	Bryn Mawr, Pa.,	113 H
Tippetts, William Bell,	St. Petersburg, Fla.,	39 S E
Twelvetrees, Frederic Rowland,	Cohoes, N. Y.,	25 S E
Vardell, Charles Gildersleeve, Jr.,	Red Springs N. C.,	98 B
*Wallower, Herbert Hoover,	Harrisburg, Pa.,	71 L
Wells, Howard Myers,	Bloomfield, N. J.,	11 H

*Candidate for degree in February 1915.

Williams, John Lauris Blake,	Orange, N. J.,	44 B
Wilson, David E. Johnston,	Portland, Ore.,	65 B
Wolf, Walter Jacob,	New York, N. Y.,	15 L
Wood, William Nicholas,	Birdwood, Va.,	3 A, H'm

A.B. JUNIORS.....100

CANDIDATES FOR THE LITT.B. DEGREE

Armstrong, Charles Vincent,	Brooklyn, N. Y.,	61 L
Armstrong, Owen,	Memphis, Tenn.,	6 S E B
*Azoy, Anastasio Carlos Mariano,	East Orange, N. J.,	66 H
Baker, Donald Robert	Mt. Vernon, N. Y.,	24 B
Baker, Hobart Amory Hare,	Manayunk, Phila., Pa.,	82 Nassau St.
Baker, James Ives,	Springfield, Ohio,	52 L
Barnes, Bernard Edwin,	Charleston, W. Va.,	22 P
Bartholomew, Orlo Alf,	Minneapolis, Minn.,	2 A, H
Bass, Walter Hickling,	Brooklyn, N. Y.,	42 H
Beck, James Mitchell,	New York, N. Y.,	102 H
Beyer, Henry Herman,	New Castle, Del.,	2 E M W
Billings, George Marshall,	Brooklyn, N. Y.,	98 B
Bolton, Frank Nelson,	Baltimore, Md.,	66 L
Bonner, Kenneth,	New York, N. Y.,	52 B
Boyd, Jackson Herr,	Harrisburg, Pa.,	31 '79 H
Briggs, Theodore Clement,	Rochester, N. Y.,	11 S W B
*Brown, George Russell, Jr.,	Brooklyn, N. Y.,	1 C, H'm
Bruce, James,	Baltimore, Md.,	51 '79 H
Bunzel, Ernest Everett,	New York, N. Y.,	2 E B
Butler, Pierce, Jr.,	St. Paul, Minn.,	8 W B
Canda, Henry Greenman,	Brooklyn, N. Y.,	3 C, H'm
Chapman, Edwin Nelson,	Baltimore, Md.,	21 H
Connett, William Brewer,	South Orange, N. J.,	6 U P
Coulter, Eliot Brewster,	Chicago, Ill.,	134 H
Curtis, William John, Jr.,	New York, N. Y.,	12 B
de Mercado, Frank Eliot,	New York, N. Y.,	112 L
Dewar, John Barr,	Bellevue, Pa.,	172 L
Dinsmore, Laird Curtiss,	New York, N. Y.,	11 S W B
Douglas, Donald Boynton,	Chicago, Ill.,	52 C
Dunn, Frederic Sherwood,	New York, N. Y.,	11 H
Dwelle, Vernon Averell,	Brooklyn, N. Y.,	53 B
Dyckman, Francis Hamilton,	Orange, N. J.,	61 '79 H
Elliott, Henry Powers,	Atlanta, Ga.,	61 '79 H
Elsworth, Oliver Bayard,	New York, N. Y.,	151 L

* Candidate for degree in February, 1915.

*Ewing, Henry Gordon,	Roland Park, Md.,	21 L
Fielder, Cecil Gray,	Lakewood, N. J.,	14 Park Pl.
Fiske, Torrance,	Minneapolis, Minn.,	112 L
France, Joseph,	Baltimore, Md.,	63 P
Freeman, Clarence Patton,	St. Davids, Pa.,	132 L
Frick, Robert Denison,	Baltimore, Md.,	43 '79 H
Gamble, Clarence James,	Pasadena, Cal.,	22 B
Gardner, Frederick William,	St. Louis, Mo.,	6 S E B
Goldsmith, Clarence Earl,	South Orange, N. J.,	23 L
*Goltra, Edward Field,	St. Louis, Mo.,	81 H
Goodspeed, James Pearson,	New York, N. Y.,	81 H
Gregory, Ralph,	Indianapolis, Ind.,	7 N D
Harper, Laurence Kent,	Cleveland, Ohio,	5 S E B
Hartshorne, Harold,	New York, N. Y.,	22 H'm
Hawkins, David Robert,	Kansas City, Mo.,	305 H'm
Heath, Paul Silas,	Buffalo, N. Y.,	29 Bank St.
Hendel, James Monroe,	Reading, Pa.,	6 E W
Holbert, Remsen Wisner,	Brooklyn, N. Y.,	5 S E B
Hughes, John Chambers,	Louisville, Ky.,	33 '79 H
Hunter, Charles Bates,	Kalamazoo, Mich.,	34 H
Ingersoll, Robert Sturgis,	Philadelphia, Pa.,	41 '79 H
Ingraham, Fred, Jr.,	Hempstead, N. Y.,	36 P
Jameson, Donald Ovid Butler,	Indianapolis, Ind.,	7 N D
Kassler, George Washington,	Denver, Col.,	62 B
Kuhn, Wendel Speer,	Pittsburg, Pa.,	6 U P
Laird, John Alexander,	New York, N. Y.,	309 H'm
Laughlin, Henry Alexander, Jr.,	Pittsburg, Pa.,	7 U P
Lichtenstein, Adolph Brussel,	New York, N. Y.,	22 L
Lloyd, Edward, Jr.,	Washington, D. C.,	113 H
MacColl, James Roberton,	Providence, R. I.,	10 U P
McKown, Gilbert Campbell,	Martinsburg, W. Va.,	14 N M R
Mead, Sumner Adelbert,	West Somerville, Mass.,	21 H'm
Messinger, Carl Wordin,	Hartford, Conn.,	12 W B
Montgomery, Francis Alexander,	Pittsburg, Pa.,	41 P
Murray, James Ormsbee,	Plainfield, N. J.,	93 B
Nevins, Theodore Clare,	East Orange, N. J.,	29 Bank St.
Noble, Sheldon Roby,	Detroit, Mich.,	7 B, H
*Nourse, Roderick,	Des Moines, Iowa,	18 Madison St.
O'Neill, John Henry,	Pittsburg, Pa.,	143 L
Painter, John Littleton Dawson,	Pittsburg, Pa.,	43 L
Pierce, Josiah, Jr.,	Washington, D. C.,	60 Hodge Rd.

*Candidate for degree in February 1915.

Potter, Charles Adams, Jr.,	Philadelphia, Pa.,	101 H
Pyle, Gerald Jackson,	Wilmington, Del.,	12 E W
Randolph, Robert Sayre Fitz	Morristown, N. J.,	310 H'm
Reeve, William Foster, III,	Moorestown, N. J.,	12 U P
Rhoads, Bernard Kelly,	New York, N. Y.,	3 A, H'm
Robertson, Frederick Irving,	Wabash, Ind.,	16 S E
*Rowland, Charles Ransom,	Baltimore, Md.,	66 L
Scull, Edward,	Somerset, Pa.,	22 P
Shackelford, William Thomas, Jr.,	Baltimore, Md.,	21 H
Shaw, Harold Dudley Vreeland,	Jersey City, N. J.,	82 B
Slaymaker, Samuel Evans, Jr.,	New York, N. Y.,	2 M D
Starbuck, Edgar Devilo, Jr.,	Saratoga Springs, N. Y.,	63 P
Stockton, Gilchrist Baker,	Jacksonville, Fla.,	32 C
Stockton, Kenneth Evans,	Ridgewood, N. J.,	111 L
Strain, Robert, Jr.,	Silver City, N. Mex.,	34 S E
Stuart, Harold Coe,	New York, N. Y.,	172 L
Thomas, Kenneth Champion,	Interlaken, N. J.,	33 B
Van Court, Albert Eugene,	Detroit, Mich.,	34 H
Vincent, Richard Gibson,	New York, N. Y.,	33 B
Vroman, John Calvin, Jr.,	Manzanola, Col.,	2 B, H'm
Wall, Ashbel Tingley, Jr.,	Providence, R. I.,	51 C
Watson, Roy Garrett,	Houston, Texas,	14 L
Winants, Frank Hillyer,	Bayonne, N. J.,	8 S E B

LITT.B. JUNIORS.....98

CANDIDATES FOR THE B.S. DEGREE

Alling, Eric Lattimore,	Rochester, N. Y.,	62 C
Beatty, John Walter, Jr.,	Pittsburg, Pa.,	51 L
Bol, Cornelis,	Princeton, N. J.,	38 N E
Campbell, Donald Whitaker,	West Roxbury, Boston, Mass,	34 P
Clapp, David Bly,	Williamsport, Pa.,	31 B
Collins, Grellet Newell,	Philadephia, Pa.,	42 H
Collins, Gridley Ward,	Virginia, Ill.,	12 B
Dean, Harold Frederick,	Minneapolis, Minn.,	112 L
Harding, Charles Clinton,	Middletown, N. Y.,	95 B
Hessenbruch, Hermann Markle,	Wynnewood, Pa.,	66 H
Honigman, Joseph Knight,	New York, N. Y.,	4 B
Hughson, Walter, Jr.,	Morganton, N. C.,	41 '79 H
Ill, Carl Haller,	Newark, N. J.,	15 B
Jenkins, John Elliott,	Chicago, Ill.,	52 B

*Candidate for degree in February 1915.

McMaster, Philip Duryee,	Philadelphia, Pa.,	102 H
Manheim, Sigmund,	Newark, N. J.,	37 S E
Meyrick, Charles Burt Elliott,	Princeton, N. J.,	11 Univ. Pl.
Owlett, Gilbert Mason,	Wellsboro, Pa.,	34 P
Shenstone, Allen Goodrich,	Toronto, Canada,	105 P
Smith, Jewell Kellogg,	New York, N. Y.,	82 B
Spalding, Edward Dean,	Detroit, Mich.,	122 H
Speers, Peter Carter,	Montclair, N. J.,	2 E B
Taylor, Burnham Kennard,	Brooklyn, N. Y.,	36 L
White, Augustine Leo,	Dorchester, Mass.,	2 S E

B.S. JUNIORS.....24

CANDIDATES FOR THE C.E. DEGREE

Beger, John Henry, Jr.,	Newark, N. J.,	143 L
Bird, Cyrus Remington,	Buffalo, N. Y.,	14 Moore St.
Bolmer, William Brevoort,	Rocky Hill, N. J.,	Rocky Hill, N. J.
Clifford, George Johnson,	New York, N. Y.,	20 P
Correll, Eugene Stevens,	Tsu, Japan,	6 S R
Craig, Alexander Mahon,	Washington, D. C.,	3 M D
Craig, Donald,	Washington, D. C.,	33 L
Darlington, Frank Graef, Jr.,	Indianapolis, Ind.,	3 U P
de Witt, Wallace Lafayette,	Spokane, Wash.,	32 Vandeventer Av.
Dixon, Homer W.,	Boonton, N. J.,	29 Bank St.
Eddy, Robert Condit,	New Rochelle, N. Y.,	1 E M W
Gibson, Robert Hammond,	New York, N. Y.,	24 B
Graham, Thornton Gillnin,	Lee, Mass.,	11 M W
Granbery, James Treanor,	Nashville, Tenn.,	4 S M R
Haddock, William Charlton, Jr.,	Oak Lane, Phila., Pa.,	74 H
Hubbell, Nelson Ensworth,	Buffalo, N. Y.,	34 N E
Hudson, William Joseph,	Philadelphia, Pa.,	5 S R
Huntley, James Warren,	Oneida, N. Y.,	7 N M R
Kennedy, John Francis,	Naugatuck, Conn.,	1 S E
Kennedy, Thomas B., Jr.,	Chambersburg, Pa.,	72 B
Kent, Moss Albert,	Rome, N. Y.,	39 U
LeCompte, Charles Robbins, Jr.,	Lakewood, N. J.,	7 S E B
Mackin, Edward Harvey,	Newark, N. J.,	54 H
Meeker, Harvey Horton,	Millburn, N. J.,	13 N W
Nissley, Warren Walmer,	Steelton, Pa.,	22 S E
Pegram, Edward Sandford, Jr.,	New York, N. Y.,	32 H
Richards, George Thomas, Jr.,	Philadelphia, Pa.,	43 U
Roebling, Siegfried,	Bernardsville, N. J.,	24 L

Sampson, Edward,	Haverford, Pa.,	5 B
Scanlan, William Gregory,	Wave Crest, Far Rockaway, N. Y., 26 Witherspoon St.	
Shaner, Isaac Heller,	Boyertown, Pa.,	5 S W
Shenk, Wilbur Jay,	Erie, Pa.,	21 '79 H
Smalshaf, Albert Jacob,	Pottstown, Pa., 276 Nassau St.	
Stevenson, Alexander Russell, Jr.,	Schenectady, N. Y., 83 Mercer St.	
Stump, Augustine Herman,	Baltimore, Md.,	141 H
Voorhees, William Walter,	Princeton, N. J., 49 Wiggins St,	
Waller, Harcourt Edmund,	Skaneateles, N. Y.,	21 '79 H
Weidig, Jacob Kleinhaus,	Newark, N. J.,	3 B
Wesson, David Moore,	Montclair, N. J., 82 Nassau St.	
Whaley, Edward Alston,	Norfolk, Va.,	41 P
Wigton, Edward Newton,	Germantown, Pa.,	32 C

C.E. Juniors.....41

Sophomore Class, 1915

Candidates for the A.B. Degree

Allee, William Coit,	Detroit, Mich.,	73 P
Allen, Charles Claflin,	St. Louis, Mo.,	D, W B
Alton, William Carol Wilson,	Chicago, Ill.,	3 B, H'm
Anderson, James Baxter, III,	Philadelphia, Pa.,	11 B
Arnold, William Campbell, II,	Orange, N. J.,	11 E W
Austin, James Grosvenor,	Catskill, N. Y.,	122 L
Baker, James Addison, Jr.,	Houston, Texas,	2 D, H
Baker, John Stewart,	New York, N. Y.,	16 C
Baker, Mac Latimer,	Washington, D. C.,	6 B
Barber, Theodore Philip,	Cambridge, Md.,	73 B
Beltzhoover, Melchior Roch,	Irvington-on-Hudson, N. Y., 15 Bank St.	
Boker, Carl Fritz, Jr.,	New York, N. Y., 82 Nassau St.	
Bongiorno, Philip,	New York, N. Y.,	9 S M R
Bonsall, George Hubert, Jr.,	Haverstraw, N. Y.,	5 A, C
Borden, William Silvers,	Groveville, N. J.,	10 S W
Boyer, Morris Stanley,	East Orange, N. J.,	101 B
Brenner, Clarence Dietz,	Youngstown, Ohio,	B, W B
Brower, Bailey,	New York, N. Y.,	104 P
Brown, William Henry,	Sanatoga, Pa.,	17 S E
Bryant, Charles Harris,	Baltimore, Md.,	1 A, H

Buckley, Charles Pitman,	Cranford, N. J.,	103 H
Caldwell, William Thomas,	Pawtucket, R. I.,	1 S M R
Campbell, Ralph Newton,	Pittsburg, Pa.,	9 N W
Carruthers, Donald Wallace,	Harrisburg, Pa.,	4 W M W
Cleveland, James Harlan,	Glendale, Ohio,	3 M D
Copeland, George Howes,	Upper Montclair, N. J.,	33 Bank St.
Craig, Albert Burchfield,	Sewickley, Pa.,	44 C
Crosby, Kenelm Winslow,	New York, N. Y.,	51 B
Cudahy, Gerald Caldwell,	Chicago, Ill.,	84 P
Culolias, Nicholas Constantine,	E. Liverpool, Ohio,	4 S W
Cutrer, John Clark,	Clarksdale, Miss.,	64 L
Davis, Combs Olden,	Hamilton Square, N. J.,	7 N W
Dixon, William Boulton,	Philadelphia, Pa.,	144 Nassau St.
Doolittle, Julius Tyler Andrews,	Utica, N. Y.,	144 Nassau St.
Dort, Ralph Bates,	Albany, N. Y.,	90 Nassau St.
Doty, William Shaw,	Pittsburg, Pa.,	24 P
Driver, Earl Spencer,	Memphis, Tenn.,	308 H'm
Dunn, Charles Eugene, Jr.,	Philadelphia, Pa.,	13 S M R
Dunn, James Michael,	Paterson, N. J.,	8 C, H
Earle, Louis de la Montague,	Newark, N. J.,	7 L P
Emery, Theodore,	Morristown, N. J.,	90 Nassau St
Erdman, Calvin Pardee,	Princeton, N. J.,	10 P
Evans, Jacob Axson, Jr.,	Memphis, Tenn.,	74 B
Fleming, David, III,	Harrisburg, Pa.,	12 E B
Frank, Everett G.,	Paris, Texas,	8 E W
Franks, Jerome Anderson Quay,	Orange, N. J.,	11 P
Froelich, Charles Ludwig,	West End, N. J.,	14 B
Galbreath, Thomas Maury, Jr.,	Babylon, N. Y.,	74 B
Galt, Sterling, Jr.,	Emmitsburg, Md.,	6 S W
Haines, Wilder Haydn,	Cleveland, Ohio,	10 M D
Hallstead, William Finn, II,	Scranton, Pa.,	14 U P
Hammond, Walter Edward,	Morris Plains, N. J.,	6 S R
Hardin, Charles Roe,	Newark, N. J.,	61 H
Harris, Richard Macy,	Rochester, N. Y.,	73 B
Hausmann, Adolay George,	Weehawken, N. J.,	20 N W
Healey, James Christopher,	New York, N. Y.,	19 N W
Heft, Edward Ivan,	Louisville, Ky.,	8 E M W
Hendrickson, Frank Dudley,	Ridgewood, N. J.,	123 L
Hills, Herbert Laurence,	Mifflintown, Pa.,	6 W M W
Holmes, Meston,	St. Louis, Mo.,	19 E W
Hosack, John Paxton,	Carnegie, Pa.,	133 L

Hough, Charles Pinckney, Jr.,	Jefferson City, Mo.,	34 '79 H
Jarman, George Wallace, Jr.,	New York, N. Y.,	123 L
Jarvis, Robert Yelverton,	New York, N. Y.,	12 P
Johnson, Walter Edmonds,	Newark, N. J.,	18 W W
Jones, Edwin Evans,	Philadelphia, Pa.,	21 M D
Kaufman, Isidor,	New York, N. Y.,	41 Park Pl.
Keller, Norman Daniel,	Pittsburg, Pa.,	33 P
Kepler, Charles Collins,	Gilbertsville, Pa.,	31 N E
Kimball, Reuel Baker, Jr.,	New York, N. Y.,	25 C
Lamarche, Edward Jules,	New York, N. Y.,	7 E B
Lewey, Cedric Herbert,	Wilkinsburg, Pa.,	2 S M R
Limond, William Stewart, Jr.,	Brooklyn, N. Y.,	7 S D
Logan, George Bryan, Jr.,	Allegheny Pa.,	13 E W
Long, William Henderson, Jr.,	Ardmore, Pa.,	16 C
Lukens, Edward Clark,	Haverford, Pa.,	7 N W
MacConnell, John Gormly,	Pittsburg, Pa.,	92 H
Mackenzie, Ian Douglas,	Hartford, Conn.,	9 A, H
McKibbin, Joseph Chambers,	St. Paul, Minn.,	1 U P
Magai, Lloyd Otto,	Woodcliffe-on-Hudson, N. J.,	8 E M W
Maxfield, Carl Webster,	Bangor, Me.,	103 H
Meigs, Joe Vincent, III,	Lowell, Mass.,	84 Nassau St.
Miller, Frank Lubbock, Jr.,	Chattanooga, Tenn.,	101 P
Mills, Dudley Holbrook,	New York, N. Y.,	11 E B
Morrison, Donald Stuart,	Big Run, Pa.,	152 Nassau St.
Morse, Walter Cripps Blake,	Washington, D. C.,	3 S W B
Motheral, Philander Knox,	Pittsburg, Pa.,	6 S D
Nicoll, DeLancey, Jr.,	New York, N. Y.,	11 P
Nimick, Thomas Marshall Howe,	Pittsburg, Pa.,	141 L
Ober, Leonard,	Baltimore, Md.,	72 H
Olcott, Mason,	New York, N. Y.,	26 C
Osborn, Earl Dodge,	New York, N. Y.,	66 C
Parsons, Theodore Dwight,	Shrewsbury, N. J.,	10 S W
Paul, John Rodman,	Philadelphia, Pa.,	34 C
Pearson, James Thomas,	Asheville, N. C.,	4 U P
Phillips, Gabriel Altamont,	Hammonton, N. J.,	1 E B
Potter, Thomas,	New York, N. Y.,	115 B
Prickett, William,	Wilmington, Del.,	3 W M W
Ray, Wilson Kennedy,	Pittsburg, Pa.,	2 A, C
Reynolds, Wilson Fiske,	Brooklyn, N. Y.,	7 S D
Ricca, Anthony Vetran,	Jersey City, N. J.,	2 N E
Riegel, George Frederic,	Philadelphia, Pa.,	2 B, C

Robinson, Stewart McMaster,	Philadelphia, Pa.,	14 A, H
Rowland, Reginald,	Clinton, N. J.,	26 C
Rusk, William Sener,	Baltimore, Md.,	4 N M R
Russell, Edward Thomas,	Liberty Grove, Md.,	20 N W
Savage, Henry Lyttleton,	Philadelphia, Pa.,	16 VanDeventer Av.
Schweitzer, Frederick,	Philadelphia, Pa.,	35 N E
Sheppard, Harold Rutherford,	Wilmington, Del.,	5 A, C
Sills, Kenneth Lander,	Mt. Vernon, N. Y.,	71 P
Smith, Dudley Cooke,	Harrisburg, Pa.,	9 N W
Smith, Jean Mason,	New Orleans, La.,	41 C
Smith, William Mason, Jr.,	New Orleans, La.,	41 C
Spencer, William Marvin,	Erie, Pa.,	184 L
Stewart, Weir,	Auburn, N. Y.,	6 S W
Street, Christopher,	Princeton, N. J.,	5 E B
Swofford, James Jefferson, Jr.,	Kansas City, Mo.,	2 S D
VanDusen, Edwin Thorp,	Philadelphia, Pa.,	72 L
Velte, Frederick Mowbray,	Harrisburg, Pa.,	14 M D
Walters, Albert Winston,	Johnstown, Pa.,	34 '79 H
Warde, Frederick Arthur,	Brooklyn, N. Y.,	20 W W
Washburn, Louis Mumford,	Philadelphia, Pa.,	3 W M W
Whaler, Charles Edgar Harold,	Wilmington, Del.,	14 S M R
White, Thomas Riddick, Jr.,	Elizabeth, N. J.,	183 L
Williams, Robert, Jr.,	Paterson, N. J.,	44 L
Williams, Roger Brian,	Baltimore, Md.,	53 P
Wilson, York Lowry,	Rock Hill, S. C.,	11 B
Wyeth, John Allen, Jr.,	New York, N. Y.,	100 P

A.B. SOPHOMORES.....128

CANDIDATES FOR THE LITT.B. OR B.S. DEGREE

Adams, Carlos Rice,	Bedford Hills, N. Y.,	10 W B
Adams, James Austin,	Bloomfield, Canada,	A, Hill
Adams, James Fairchild,	Glen Cove, N. Y.,	2 B, C
Apgar, Harold,	High Bridge, N. J.,	2 E M W
Arthur, Rex Price,	San Diego, Cal.,	17 S M R
Atha, Stuart Kimball,	Newark, N. J.,	6 N D
Bailey, Joseph Weldon, Jr.,	Washington, D. C.,	106 P
Barber, William Alexander, Jr.,	New York, N. Y.,	53 C
Bard, Richard,	Hueneme, Cal.,	7 S W B
Battles, Winthrop Hilton,	Philadelphia, Pa.,	144 Nassau St.
Beall, Edward Clark,	Uniontown, Pa.,	114 H
Bennett, John Hartwell,	North Abington, Mass.,	Z, U

Benson, Robert Granger,	Passaic, N. J.,	183 L
Best, Tharratt Gilbert,	Utica, N. Y.,	55 C
Blodgett, Roswell Livingston,	St. Louis, Mo.,	21 C
Booth, Alfred Lee,	Webster Groves, Mo.,	3 A, C
Boyle, Robert, Jr.,	Totowa Borough, N. J.,	E, E B
Brazelton, Thomas Berry,	Waco, Texas,	42 P
Carter, Ogden Bowers,	East Orange, N. J.,	101 B
Chapin, Harold Wolcott,	Brooklyn, N. Y.,	5 E B
Chew, William Bartlett, Jr.,	Houston, Texas,	6 B
Church, George Myers,	Tenafly, N. J.,	22 H
Clancy, William Percy,	Louisville, Ky.,	310 H'm
Compton, Randolph Parker,	St. Louis, Mo.,	23 P
Cooley, Samuel Morton,	Flemington, N. J.,	152 Nassau St.
Cooper, Leslie Bradford,	Morristown, N. J.,	31 C
Cowan, Hector Edmund,	Hobart, N. Y.,	9 W W
Cowan, Robert Swepson,	Knoxville, Tenn.,	2 U P
Cumbler, George William,	Steelton, Pa.,	122 H
Cumming, Joseph Bryan, Jr.,	Augusta, Ga.,	23 '79 H
Dake, Edward Vaughan,	Cleveland, Ohio,	6 W B
Davison, James Virgilius, Jr.,	Toledo, Ohio,	181 L
Deacon, Joseph Gurney,	Mt. Holly, N. J.,	114 H
deCoppet, Edward Andre,	New York, N. Y.,	115 B
Deming, Richard, Jr.,	New York, N. Y.,	86 Nassau St.
Devereux, James Henry, Jr.,	New York, N. Y.,	71 P
Dimon, Frank Kilbourne,	Sunderlinville, Pa.,	40 N E
Dodd, Alexander Dickson,	Montclair, N. J.,	4 N R
Drinker, Philip,	So. Bethlehem, Pa.,	34 C
Ellicott, Valcoulon Le Moyne,	Baltimore, Md.,	7 W W
Elliott, Douglas Alexander,	New York, N. Y.,	9 L P
Ellis, Walker Mallam,	New Orleans, La.,	90 Nassau St.
Faber, Eberhard Lothar,	New York, N. Y.,	2 S E B
Faeth, Gilbert Ellis,	Kansas City, Mo.,	6 S W B
Finney, John Miller Train, Jr.,	Baltimore, Md.,	72 H
Fox, John Harold,	Harrisburg, Pa.,	311 H'm
Friend, Albert Mathias, Jr.,	Ogontz, Pa.,	3 A, C
Froelick, Howard,	Brooklyn, N. Y.,	43 H
Garlow, Homer Gaie,	Morgantown, W. Va.,	3 E M W
Garner, Charles Edwin, Jr.,	Jacksonville, Fla.,	64 L
Garvin, John Aethuruld,	East Orange, N. J.,	2 N D
Geddis, Craig,	Pittsburg, Pa.,	16 E W
Gile, Harold Hatch,	Colorado Springs, Colo.,	84 Nassau St.

Gill, Frank George,	Gloversville, N. Y.,	112 Mercer St.
Glenn, Roland Malone,	Renovo, Pa.,	F, W B
Greene, Orland Smith,	Cincinnati, Ohio,	133 H
Gribbon, Robert Benjamin,	Plainfield, N. J.,	5 W W
Griffin, Dudley DeMunn,	Scranton, Pa.,	21 P
Gwathmey, Archie Binford, II,	Rye, N. Y.,	7 L P
Hall, Richard Ellis,	Evanston, Ill.,	62 Nassau St.
Hammond, Edward Hopkins,	Washington, D. C.,	61 P
Hammond, James Sidney,	Pittsburg, Pa.,	72 L
Hampton, Robert, Jr.,	Titusville, Pa.,	133 L
Harter, William Wickham Case,	Trenton, N. J.,	8 N R
Haviland, Amidee Tebo,	Port Jefferson, N. Y.,	76 H
Hayes, Martin Joseph,	South Manchester, Conn.,	7 Aiken Ave.
Heddens, Barret Spencer,	St. Joseph, Mo.,	3 B, H'm
Heinzelmann, Gerald Matthias,	Danbury, Conn.,	62 Nassau St.
Hemphill, John,	Washington, D. C.,	106 P
Hendricks, Thomas Abram,	Indianapolis, Ind.,	104 P
Hilliard, Charles Craig,	Asheville, N. C.,	312 H'm
Holden, Raymond Peckham,	New York, N. Y.,	2 S E B
Holman, Russell William,	Newark, N. J.,	15 W W
Hood, Robert Newton,	Medina, N. Y.,	8 S M R
Hormel, Jay Catherwood,	Austin, Minn.,	44 C
Horner, Walter Vaughan,	Pittsburg, Pa.,	6 S D
Houston, Alfred Everett,	Pittsburg, Pa.,	1 M D
Humphreys, Malcolm,	Morristown, N. J.,	31 C
Hurst, John Edward,	Baltimore, Md.,	181 L
Ifft, George Nicholas, II,	Pocatello, Idaho,	6 S W B
Jackson, Philip Ludwell,	Portland, Ore.,	108 P
Jewett, Thomas Rosevear,	Plainfield, N. J.,	12 W W
Jones, William Larimer Jr.,	Pittsburg, Pa.,	141 L
Kellett, Roderick Gilroy,	Philadelphia, Pa.,	10 P
Kidder, Amos Mansfield,	Highwood, N. J.,	184 L
Kline, James Morley,	Johnstown, Pa.,	61 C
Kraus, William,	New York, N. Y.,	22 C
Levengood, Sidney Lawrence,	Wayne, Pa.,	10 S W B
Liebhardt, Fred Charles,	Denver, Col.,	8 W W
Linder, John Albert,	Mohegan Lake, N. Y.,	40 P
Longstreth, Alfred Bevis,	St. Louis, Mo.,	2 D, H
Lyttle, Herbert George,	Newark, N. J.,	300 H'm
McAlpin, Joseph Roderick,	New York, N. Y.,	133 H
MacArthur, Lindsay,	New York, N. Y.,	307 H'm

McCance, Pressly Hodge,	Edgewood Park, Pa.,	33 P
McCoy, Charles Clifton,	East Liverpool, Ohio,	4 S W
McCutchen, Brunson Simpson,	Plainfield, N. J.,	54 C
McEldowney, Robert,	Pittsburg, Pa.,	62 H
Mace, Winfred Hayes,	So. Pasadena, Cal,.	15 S E W
Macks, Robert Gennert,	Jersey City, N. J.,	21 P
McLanahan, Stewart Kennedy,	Princeton, N. J.,	8 Dickinson St.
McManus, Henry George,	Newark, N. J.,	21 B
Marshall, Linton Satterthwaite,	Trenton, N. J.,	7 N R
Martin, John Timothy,	New York, N. Y.,	22 '79 H
Martin, Lay,	Roland Park, Md.,	23 '79 H
Mason, Walter Spencer,	Wilkes-Barre, Pa.,	16 M D
Meeker, Albert Ross,	Millburn, N. J.,	13 N W
Miller, DeLaskie,	Atchison, Kan.,	4 W M W
Miner, Robert Charles,	Wilkes-Barre, Pa.,	31 P
Mixsell, Donald Gibson,	Easton, Pa.,	61 H
Morris, Anthony Saunders, Jr.,	Haverford, Pa.,	9 N D
Morris, Langdon Emmons,	Long Branch, N. J.,	14 E W
Mundt, August John,	Trenton, N. J.,	Trenton, N. J.
Myrick, Donald,	Springfield, Mass.,	122 L
Newbold, Fitz Eugene Dixon,	Philadelphia, Pa.,	144 Nassau St.
Nicholson, Thomas, III,	New York, N. Y.,	6 N M R
O'Sullivan, George Joseph,	New York, N. Y.,	42 L
Pate, Maurice,	Denver, Col.,	7 B
Pierce, Franklin Lovering,	Milwaukee, Wis.,	96 B
Perlman, Solomon,	Trenton, N. J.,	Trenton, N. J.
Porter, Harry Frank,	Trenton, N. J.,	3 N E
Purdy, Ray Williams,	New York, N. Y.,	6 N D
Putnam, Olin Still,	Johnstown, N. Y.,	63 C
Quinby, Ripley,	Newark, N. J.,	300 H'm
Read, Bertwal Chapin,	Newark, N. J.,	2 W W
Rehm, Harold Whitaker,	Philadelphia, Pa.,	7 M D
Rentschler, George Adams, Jr.,	Hamilton, Ohio,	86 Nassau St.
Reynolds, Samuel Henry, Jr.,	Lancaster, Pa.,	53 '79 H
Richardson, Charles, Jr.,	Tacoma, Wash.,	31 P
Roberts, Elzey Meacham,	St. Louis, Mo.,	10 A, H
Roberts, Walter van Braam,	Titusville, Pa.,	11 C
Robertson, Malcolm Troop,	Brooklyn, N. Y.,	154 L
Robinson, James B.,	Uniontown, Pa.,	45 U
Roll, Rudolph Groke,	Trenton, N. J.,	Trenton, N. J.
Rose, Julius Bernd,	Pittsburg, Pa.,	92 H

Rosenberg, Samuel Charles,	Town of Union, N. J., 19 S W
Russell, Baxley Blind,	Hoopeston, Ill., 6 S E B
Salmon, Hamilton Henry, Jr.,	Brooklyn, N. Y., 53 L
Salter, Dwight William,	Brooklyn, N. Y., 1 S E B
Sanford, Laurence Hunt,	Port Washington, N. Y., 121 H
Scannell, Robert Henry,	Philadelphia, Pa., 10 W W
Schoepf, Albin Kesley,	Cincinnati, Ohio, 86 Nassau St.
Sealy, William Willis,	Galveston, Texas, 90 Nassau St.
Seiberling, Willard Penfield,	Akron, Ohio, 2 S D
Severance, F. Rolland,	Willsboro, N. Y., 4 S E B
Sharp, Edwin Compton,	Mauricetown, N. J., 11 N M R
Shaw, James Prestley,	Pittsburg, Pa., 42 Wiggins St.
Sikes, Frederick Gilbert, Jr.,	Buffalo, N. Y., 23 B
Sloan, Eugene Williams,	St. Louis, Mo., 23 P
Smith, John McIlhenny,	Harrisburg, Pa., 11 E B
Smouse, Murray Carleton,	Cumberland, Md., 73 P
Speer, Charles Edward,	Pittsburg, Pa., 61 P
Stephens, Allan Wilcox,	Montclair, N. J., 9 A, H
Stewart, John Quincy, Jr.,	Harrisburg, Pa., 19 W W
Stover, Edward Conklin, Jr.,	Trenton, N. J., 311 H'm
Sullivan, John Dwight,	New York, N. Y., 53 L
Sutphen, John Schureman, Jr.,	New York, N. Y., 22 H
Swart, Ira Ellsworth,	New York, N. Y., 42 P
Swart, Wallace Soule,	New York, N. Y., 42 P
Sweet, Homer Kirk,	Phoenix, N. Y., 113 B
Terry, Matson Cady,	New York, N. Y., 6 W B
Thayer, Lloyd Josselyn,	Wakefield, Mass., 84 Nassau St.
Thomas, Arthur Raymond,	Lewisburg, Pa., 4 N R
Thomas, Philip Edward,	Johnstown, Pa., 124 H
Thomas, William R., Jr.,	Johnstown, Pa., 68 L
Thorington, James Monroe,	Philadelphia, Pa., 108 P
Towson, Charles Emory,	Philadelphia, Pa., 42 S E
Upson, Edward Russell,	Mansfield, Ohio, 124 H
VanDeventer, Ludlow,	Plainfield, N. J., 7 S R
vanDoren, Harold Surfleet,	Princeton, N. J., Washington Inn
Van Leer, William Leicester,	Philadelphia, Pa., 23 C
Voorhees, George Russell,	Trenton, N. J., Trenton, N. J.
Walbridge, Ernest Augustus,	Plainfield, N. J., 2 N D
Ward, Galbraith,	New York, N. Y., 53 '79 H
Whitehouse, Charles Edward, Jr.,	Roosevelt, N. Y., 3 N R
Williams, Donald Henderson,	Germantown, Phila., Pa., 3 N R

Williamson, Wallace J., Jr.,	Catlettsburg, Ky.,	95 B
Winant, Frederick, Jr.,	New York, N. Y.,	2 U P
Wood, Creighton Lee,	Denver, Col.,	7 B
Wood, Ernest Bowker,	Rummerfield, Pa.,	17 S E
Wood, Luther Edmonds,	Buffalo, N. Y.,	16 M D
Woodman, Edgar Foster,	Concord, N. H.,	25 C
Yeiser, Henry Craig, Jr.,	Cincinnati, Ohio,	131 L

LITT.B. OR B.S. SOPHOMORES..... 183

CANDIDATES FOR THE C.E. DEGREE

Adams, Paul David,	Newark, N. J.,	2 C, H'm
Ballin, Harold Roy,	New York, N. Y.,	4 M D
Barr, William Manning,	Metuchen, N. J.,	22 '79 H
Bleecker, Theophylact Bache,	Princeton, N. J.,	82 Nassau St.
Caine, Thomas James,	Naugatuck, Conn.,	11 S M R
Cook, Leslie Warren,	Uniontown, Pa.,	12 S M R
Cox, Leonard,	New York, N. Y.,	9 E W
Crawford, Alan,	Merion Station, Pa.,	312 H'm
Cruger, Nicholas Wight,	Albany, Ga.,	6 W W
Dunlap, William Crawford,	Harrisburg, Pa.,	40 S E
Faber, John Heft,	Glenside, Pa.,	3 E M W
Fox, Joseph Mickle, Jr.,	Torresdale, Pa.,	144 Nassau St.
Fox, Samuel Mickle, Jr.,	Torresdale, Pa.,	90 Nassau St.
Hanks, George Raymond,	Chambersburg, Pa.,	A, Hill
Harries, William Harold,	South Orange, N. J.,	21 B
Horn, Thomas Lefler,	Philipsburg, Pa.,	9 M D
Horton, Jerome Loton,	New York, N. Y.,	9 M D
Humphrey, Arthur Field,	Edgewood Park, Pa.,	12 S W
Jermyn, Edmund Beeson, Jr.,	Scranton, Pa.,	1 U P
Kennedy, James Coyle,	Chambersburg, Pa.,	308 H'm
Lyons, Jay Joseph,	Princeton, N. J.,	194 Nassau St.
MacMillan, Edward Allen,	Perrineville, N. J.,	31 B
McTigue, John Burlinson,	Far Rockaway, N. Y.,	51 B
Miller, Albert Pardon, III,	Providence, R. I.,	12 P
Ould, Thomas Curtis,	East Orange, N. J.,	15 S W
Patton, David Andrew,	Newark, N. J.,	17 E W
Reeves, Robert Hughes,	Elizabeth, N. J.,	U, U
Reid, Richard Irving,	New York, N. Y.,	121 H
Samuel, Harold Niccolls,	Chicago, Ill.,	43 H
Siedler, Charles Parker,	Montclair, N. J.,	1 L P
Streit, John Bradley,	Birmingham, Ala.,	19 Madison St.

Trenkmann, Edward,	Brooklyn, N. Y.,	182 L
Trenkmann, Frederick,	Brooklyn, N. Y.,	182 L
Wallace, George Clayton, Jr.,	Paducah, Ky.,	144 Nassau St.
Waller, Earll Colden,	Skaneateles, N. Y.,	2 N M R
Williams, George Alexander,	Newport, R. I.,	62 Nassau St.
Worthington, Thomas, Jr.,	Birmingham, Ala.,	12 M D

C.E. SOPHOMORES.....37

FRESHMAN CLASS, 1916

CANDIDATES FOR THE A.B. DEGREE

Abbett, Leon, Jr.,	New York, N. Y.,	90 P
Alexander, Virginius Wilkins,	Pine Bluff, Ark.,	Hill
Alyea, Ethan Davidson,	Clifton, N. J.,	1 S D
Armstrong, Hamilton Fish,	New York, N. Y.,	31 Univ. Pl.
Banigan, Carlton,	Paterson, N. J.,	13 M D
Barbour, Fritz Krupp,	New York, N. Y.,	4 A, C
Barr, John McFerran,	Louisville, Ky.,	12 H'm
Benton, Arthur Ferguson,	Brooklyn, N. Y.,	142 L
Blair, Francis Preston, III,	Philadelphia, Pa.,	11 Dickinson St.
Bowman, Samuel Andrew,	Springfield, Ohio,	17 Edwards Pl.
Brotemarkle, Robert Archibald,	Salisbury, Md.,	8 N M R
Brown, Harold Gilmore,	Elizabeth, N. J.,	10 W M W
Bullock, Benjamin, III,	Ardmore, Pa.,	83 B
Burke, William Jay, Jr.,	Newark, N. J.,	31 Univ. Pl.
Carter, Edward Sterling,	Washington, Conn.,	1 A, H'm
Clair, Verne,	Orange, N. J.,	76 U
Crocker, Dana Rumsey,	Williamsport, Pa.,	10 N W
Cromwell, Oliver Eaton,	New York, N. Y.,	13 C
Cross, Harry Carl,	Philadelphia, Pa.,	43 B
Dane, James Walter Barnard,	East Orange, N. J.,	164 Nassau St.
Davies, Thurston Jynkins,	Gloucester City, N. J.,	10 S R
Davis, Nathaniel Penistone,	Princeton, N. J.,	58 Mercer St.
Dawbarn, Robert Holmes,	New York, N. Y.,	71 U
Day, Ewing Wilbur, Jr.,	Pittsburg, Pa.,	93 H
Deitsch, Edward Joseph, Jr.,	New York, N. Y.,	14 B
DeLacy, George Charles, Jr.,	Woodmere, N. Y.,	M, Hill
Dell, William Stanley,	Morristown, N. J.,	51 H
Demaree, David Ralph,	Newport, Pa.,	47 N. Tulane St.

Diller, Herbert Esbenshade, Leaman Place, Pa., 30 U
Dunn, Arthur Charles, Paterson, N. J., 8 C, H
Edgar, Webster LeRoy, Cazenovia, N. Y., 15 Univ. Pl.
Evans, Gwilym Dudley, Scarsdale, N. Y., Hill
Evans, Murray Carleton, St. Louis, Mo., 10 A, H
Evans, Raymond David, Pittsburg, Pa., 32 Wiggins St.
Ferguson, Donald Van Dyck, Garden City, N. Y., 47 Univ. Pl.
Ferguson, Eric, Garden City, N. Y., 47 Univ. Pl.
Fisher, Harold Edward, Pittsburg, Pa., 29 Bank St.
Franklin, Benjamin, Jr., Germantown, Pa., 39 N E
Frantz, Angus Macdonald, Duluth, Minn., Morningside Ave.
Frazier, Earl Johnston, Davenport, N. Y., 47 N. Tulane St.
Frontz, Clinton Walter, Hughesville, Pa., 32 VanDeventer Av.
Fundenburg, George Baer, Pittsburg, Pa., 12 Park Pl.
Gadebusch, Paul Helmuth, Summit, N. J., 15 Univ. Pl.
Garber, Myron Beeghly, Jr., Pittsburg, Pa., 15 Univ. Pl.
Garmany, Jasper Bissett Champion, New York, N. Y., 14 P
Gates, Moore, Constantinople, Turkey, 90 P
Gilland, Henry Gibbes, New Bedford, Mass., 80 U
Glover, Lawrence Litchfield, Haddonfield, N. J., 10 S R
Green, James Sproat, Jr., Elizabeth, N. J., 10 Madison St.
Harvey, Henry, Jr., Cartersville, Ga., 14 S E
Haupt, Henry Lloyd, Abington, Pa., 10 S M R
Hewitt, Theron, Williamsburg, Pa., 18 S M R
Heyl, Robert Chapman, Jr., Wynnewood, Pa., 45 Univ. Pl.
Heyl, William Esher, Jr., Wynnewood, Pa., 45 Univ. Pl.
Hirschberg, David Scott, Newburgh, N. Y., 14 Chambers St.
Holmes, John Burt, New York, N. Y., 20 S W
Hopkins, William Lathrop, Short Hills, N. J., 2 L P
Hoyt, Jesse, New Caanan, Conn., 15 Edwards Pl.
Hudnut, Herbert Beecher, Youngstown, Ohio, 15 S M R
Hunter, Allan, Riverside, Cal., 15 Edwards Pl.
Huyler, John Seys New York, N. Y., 14 Edwards Pl.
Hyatt, Richard Arnold, Trenton, N. J., 8 N R
Hypes, Samuel Loomis, Evanston, Ill., 16 W W
Iaccaci, August Thayer, New York, N. Y., 11 Alexander St.
Irvine, Robert Linn, Street, Md., 1 S W
Ives, Arthur Hoyt, Summit, N. J., P, U
Jackson, Arthur Hartt, New York, N. Y., 47 Univ. Pl.
Kelleher, Albert Aloysius, New York, N. Y., 15 Dickinson St.
Kennedy, David Gregg, Ridley Park, Pa., 12 Park Pl.

Kennedy, Herbert Henry, Jr., Chicago, Ill., 56 C
Kenny, Andrew Trowbridge Hutton, Detroit, Mich., 11 Univ. Pl.
Kiefel, Ernst Philip, Archbald, Pa., 5 N E
Knapp, Herman Adolph, Philadelphia, Pa., 36 Bank St.
Knight, Oliver Dudley, St. Louis, Mo., 29 N E
Knox, Walter Burnside, Pittsburg, Pa., 11 Alexander St.
Lamberton, Henry McClelland, Jr., Winona, Minn., 80 Nassau St.
Law, Bernard Carter, St. Davids, Pa., 83 B
Lloyd-Smith, Wilton, Elmira, N. Y., 42 C
McAleenan, Henry Alvin, New York, N. Y., Hill
McComas, Oliver Parker, Jr., Roland Park, Md., 3 E W
Machemer, Paul Adam Gehr, Tacony, Pa., 57 B S
Mackie, William Henry Trotter, Philadelphia, Pa., 9 U P
McLanahan, John Davidson, Princeton, N. J., 8 Dickinson St.
McWilliams, Clifton Alexander, Shamokin, Pa., T, U
Martin, Christian Frederick, Nazareth, Pa., 190 Nassau St.
Massie, Joel White, Montgomery, Ala., Edwards Pl.
Meier, Elmer George, Chicago, Ill., 15 P
Miller, Neville, Louisville, Ky., 31 Univ. Pl.
Mitchell, Edwin Knox, Jr., Hartford, Conn., 14 Edwards Pl.
Morgan, John Williams, New York, N. Y., 42 B
Mount, Lester, Princeton, N. J., R. F. D. No. 2
Neely, John Howard, Jr., Mifflintown, Pa., 304 H'm
Nevin, John, Jr., Jersey City, N. J., K, U
Nidetzky, Charles Francis, Philadelphia, Pa., 15 Dickinson St.
Oakley, George Washington, Jr., Pleasantville, N. Y., 60 Univ. Pl.
O'Brien-Moore, Ainsworth, Los Angeles, Cal., V, U
Osborn, William Henry, Garrison-on-Hudson, N. Y., 42 C
Patterson, Robert Leet, Shields, Pa., 31 Univ. Pl.
Payne, Francis Dana, Erie, Pa., 112 H
Payson, Laurence George, Englewood, N. J., 17 Edwards Pl.
Phraner, Stanley Lansing, East Orange, N. J., 11 Dickinson St
Potts, Edgar Leroy, Holmesburg, Pa., 19 Bank St.
Ransom, Lennox, New York, N. Y., 11 S E
Raymond, John Marshall, Jr., Salem, Mass., 64 B
Reed, Nelson, Pittsburg, Pa., 12 Park Pl.
Reynolds, Sanford Cobb, New York, N. Y., 102 P
Ritchey, Herbert Dern, Altoona, Pa., Hill
Robinson, Samuel Stewart, Saltsburg, Pa., 56 B S
Rodgers, Francis Ryerson, Springfield, Ohio, 14 Dickinson St.
Ropes, Lawrence Gardner, New York, N. Y., 7 Park Pl.

Rose, Richard Wigley Perrott,	Upper Montclair N. J., 32 VanDeventer Av.
Russell, John, Jr.,	Philadelphia, Pa., 19 Bank St.
Sargent, Henry Edgar,	Washington, D. C., Edwards Pl.
Scudder, Mason,	St. Louis, Mo., 79 U
Scudder, Norman Waterbury,	Glastonbury, Conn., 53 Univ. Pl.
Sellers, Lee West,	Montclair, N. J., 64 U
Semmens, Charles Galbraith,	Turtle Creek, Pa., 19 Univ. Pl.
Shoemaker, Samuel Moor, Jr.,	Eccleston, Md., 11 U P
Sikes, Gordon Gowans,	Buffalo, N. Y., 23 B
Smyth, Charles Phelps,	Princeton, N. J., 22 Morven St.
Speers, James Milliken, Jr.,	Montclair, N. J., 10 S D
Strong, Louis Bergner,	Plainfield, N. J., 17 Bank St.
Swatland, Donald Clinton,	Newark, N. J., 11 W W
Sweet, Lennig,	Denver, Col., 85 P
Talley, Allen Wortham,	New York, N. Y., 14 S D
Tappen, Clarence Muir,	Jersey City, N. J., 36 S E
Van Wyck, Samuel Barent,	Quogue, N. Y., 31 Univ. Pl.
Walton, Loring Baker,	Kansas City, Mo., 9 S W B
Ward, Dudley Livingston,	Rochester, N. Y., 11 Dickinson St.
Watt, Donald Bates,	Lancaster, Pa., 62 P
West, William Armstrong,	Beirut, Syria, 1 S W
Williams, Henry Augustus,	Paterson, N. J., 46 L
Wilson, Edmund, Jr.,	Red Bank, N. J., 1 B, H'm
Winchell, Homer Best,	Brooklyn, N. Y., 13 N M R
Woodbridge, Caspar Ligon,	Shanghai, China, 403 H S
Wortendyke, Reynier Jacob, Jr.,	Jersey City, N. J., 7 W B
Young, Charles Milbank,	New York, N. Y., 39 Univ. Pl.

A.B. FRESHMEN.....137

CANDIDATES FOR THE LITT.B. OR B.S. DEGREE

Abeles, Charles Tobias, Jr.,	Little Rock, Ark., 25 Bank St.
Ackerman, Marion Smith, Jr.,	Plainfield, N. J., 19 Univ. Pl.
Agar, William Macdonough,	New Rochelle, N. Y., 15 Univ. Pl.
Ames, Ben Allen,	Oklahoma City, Okla., 35 P
Armstrong, James Syng,	Middletown, Conn., 48 Mercer St.
Atterbury, Boudinot Bakewell,	New York, N. Y., 81 P
Bailey, Ferdinand Whitall,	Sewickley, Pa., 73 H
Baker, David Bratt,	Baltimore, Md., 10 E W
Baker, John Merrell,	Goshen, Ind., 35 P
Baker, Joseph Dill,	Baltimore, Md., 11 A, H

Bamman, Edward Becker, Princeton, N. J., 27 Chambers St.
Barba, Philip Stanley, Germantown, Pa., 48 Mercer St.
Barber, Laird Howard, Jr., Mauch Chunk, Pa., 39 Univ. Pl.
Barnett, Henry Harvey, Philadelphia, Pa., 31 Univ. Pl.
Beatty, William Hamnett, Pittsburg, Pa., 93 H
Bevin, Allen Williams, Jamaica, N. Y., 10 Madison St.
Biddle, Nicholas, Philadelphia, Pa., 15 Univ. Pl.
Biddle, Osborne Tatman, Wilmington, Del., 9 S W
Bingham, Albert Busch, New York, N. Y., 12 N M R
Bird, Emerson Prall, Princeton, N. J., 4 A, C
Birdsall, George James Townsend Albany, N. Y., 11 Univ. Pl.
Bobbs, Julian, Indianapolis, Ind., 17 Edwards Pl.
Bower, Wallace, Scranton, Pa., N, U
Bowman, Walter Hill, Jr., Owensboro, Ky., 93 P
Bradley, William Edward, Frankfort, Ky., 15 Univ. Pl.
Brown, Lawrence, Brooklyn, N. Y., 15 Edwards Pl.
Bruen, Alexander McWhoter, Belvidere, N. J., 5 A, H
Buchanan, Edwin Chapman, Brooklyn, N. Y., 43 VanDeventer Av.
Bunnell, Milton Joseph, Jersey City, N. J., 200 Nassau St.
Burford, Wiley Haralson, Oscala, Fla., 11 Univ. Pl.
Burns, Robert Williamson, West Carrolton, Ohio, 28 C
Burr, William Judson, Jr., Trenton, N. J., 61 U
Butler, Allan Macy, Yonkers, N. Y., 12 H'm
Butler, William Jerome, St. Paul, Minn., 11 Dickinson St.
Butterworth, James Ebert, Germantown, Pa., 40-50 P
Calam, Henry Mackiness, Ossining, N. Y., 68 L
Campbell, Charles Lawton, New York, N. Y., 43 VanDeventer Av.
Carey, Joseph Maull, Glenside, Pa., 62 P
Carty, John Russell, Short Hills, N. J., 53 Univ. Pl.
Cator, William Whitfield, Jr., Roland Park, Md., 14 Park Pl.
Chaplin, Robert Tappan, Washington, D. C., 43 VanDeventer Av.
Childs, Elmer Elsworth, Lyons, N. J., 12 S W B
Cleveland, Robertson Lispenard, New York, N. Y., 161 L
Cooper, Samuel Lundeen, Sewickley, Pa., 112 H
Corson, David Noble, Newark, N. J., 18 M D
Cramer, Kenneth Frank, Gloversville, N. Y., 112 Mercer St.
Crawford, William Chauncey, Jr. Easton, Md., 14 Park Pl.
Crouse, Charles Beecher, Utica, N. Y., 93 P
Currier, Harry Goodrich, Jr., Newark, N. J., Hill
Danenhower, John Willett, Haddonfield, N. J., 25 Bank St.

Davy, William Myron, Atlantic City, N. J., 50 U
Dawes, Neil Booker, Evanston, Ill., 19 Univ. Pl.
Dechert, James Flanagan, New York, N. Y., 19 Madison St.
Decker, Edward Spaulding, Minneapolis, Minn., 21 Bank St.
De Long, Oscar Anderson, Jr., Montclair, N. J., 32 VanDeventer Av.
Deyo, William Hoornbeek, Napanock, N. Y., 19 Edwards Pl.
Dinsmore, Alvin Lenhart, Baltimore, Md., Hill
Dixon, Wyllys, Flushing, N. Y., 9 Park Pl.
Dodd, Edmund Davey, Bloomfield, N. J., 16 B
Dodd, Wilson Farnsworth, Montclair, N. J., 10 S D
Dodge, William Waldo, Jr., Washington, D. C., 47 U
Douglas, Byrd, Jr., Nashville, Tenn., 28 C
Dowell, Julian Noyes, Washington, D. C., 73 U
Ellis, Donovan Russell, Newark, N. J., Hill
Farrell, Frank Loren, Pittsburg, Pa., 46 Wiggins St.
Fendrick, Percy Orr, Mercersburg, Pa., 19 Univ. Pl.
Ferree, Robert Burnside, Jr., Pittsburg, Pa., 39 Univ. Pl.
Fillebrown, William Young, Washington, D. C., 15 Dickinson St.
Forney, Louis Gerisch, Cleveland, Ohio, S, U
Frank, Harvey Haven, Harrisburg, Pa., 47 N. Tulane St.
Frank, William Walter, Paris, Texas, 47 Univ. Pl.
Frederick, Thomas Lothrop, Buffalo, N. Y., 7 E M W
Fritz, George Thompson, Philadelphia, Pa., Hill Annex
Furman, Richard Way, Trenton, N. J., 7 N R
Gabriel, Ervant, Town of Union, N. J., 15 VanDeventer Av.
Gaines, Ludwell Ebersole, Fayetteville, W. Va., Hill
Giffin, Paul Ganson, Orange, N. J., 16 Edwards Pl.
Gill, Logan Blair, Overbrook, Pa., 15 Dickinson St.
Glenn, John Jay, Evanston, Ill., 19 Univ. Pl.
Glick, Frank, Pittsburg, Pa., 46 Wiggins St.
Glogau, William Emile, New York, N. Y., 47 Univ. Pl.
Golden, Benjamin Ira, Elkins, W. Va., 41 U
Gordon, Harry Lincoln, Jr., Cincinnati, Ohio, 11 Dickinson St.
Gould, Ormond Valentine, New York, N. Y., 19 Univ. Pl.
Grant, Bethune Morse, Johnstown, N. Y., O, U
Hahn, Harold Church, New York, N. Y., 14 S D
Harmonson, Charles Leland, Clayton, Del., L, U
Harrer, John Archibald, Brooklyn, N. Y., 42 N E
Harrigan, Arthur Nolan, New York, N. Y., 9 S E B
Harrison, Frederick Van Lennep, Montclair, N. J., 33 Bank St.

Harvey, Harold Dortic, New York, N. Y., 15 Edwards Pl.
Haskell, Amory Haskell, New York, N. Y., 17 Edwards Pl.
Hays, Westwood Bowden, Jr., Waco, Texas, 80 Nassau St.
Heath, Walter Layton, Summit, N. J., 11 S E B
Heintz, John Eichler, New York, N. Y., 163 L
Hibben, Thomas Entriken, Jr., Indianapolis, Ind., 75 H
Hinchman, Ralph Pratt, Jr., New York, N. Y., 124 L
Hockmeyer, Clive Edward, Lowell, Mass., G, Hill
Hollander, Robert Bertram, New York, N. Y., 19 Univ. Pl.
Hurlburt, William Merritt, Germantown, Pa., 143 H
Jacka, Charles Edgar, New York, N. Y., 15 Univ. Pl.
Jackman, Alan, Pittsburg, Pa., 11 Dickinson St.
Jackson, Thomas Broun, Charleston, W. Va., 64 B
Jamison, Thomas Percy, Greensburg, Pa., Edwards Pl.
Jewett, William van Duyn, Plainfield, N. J., 47 Univ. Pl.
Johnston, John Rodgers, Jr., Pittsburg Pa., 23 M D
Jordan, Brady Rimbey, Pittsburg, Pa., 9 N R
Kahn, Alfred Moses, New York, N. Y., Hill
Kalt, William MacKenzie, New York, N. Y., 31 Univ. Pl.
Karow, Gustav Ludwig, Savannah, Ga., 111 H
Kenyon, Douglas Houston, New York, N. Y., 15 Univ. Pl.
Kenyon, Nelson Townley, New York, N. Y., 42 B
Kerr, Hamilton Kerner, White Plains, N. Y., Hill
Kimball, Alden, New York, N. Y., 15 Edwards Pl.
King, William Campbell, Jr., Pittsburg, Pa., 17 Edwards Pl.
Kruse, Ferdinand John, Brooklyn, N. Y., 72 U
Lake, Donelson Martin, Memphis, Tenn., 53 Univ. Pl.
Lee, Edward Brooke, Silver Spring, Md., 17 Edwards Pl.
Lee, Elliott Hugh, Ridgway, Col., 15 S E
Lester, Robert Ridenour, Kansas City, Mo., 85 P
Link, Vergil Gentry, Stamford, Conn., 32 Wiggins St.
Linn, Chapin Chapman, Brookline, Mass., 27 Univ. Pl.
Lloyd, Edward Stabler, Red Bank, N. J., 144 L
Loeb, Arthur Melville, Brooklyn, N. Y., 77 U
Love, William De Loss, Jr., Hartford, Conn. 11 Alexander St.
McClumpha, Charles Wesley, Amsterdam, N. Y., 106 H
MacCready, Paul Beattie, Ridgewood, N. J., 14 S W
MacCready, Robert Houston, Jr., Ridgewood, N. J., 14 S W
McKee, Ralph Lowe, Tompkinsville, N. Y., 31 Univ Pl.
McKinney, Robert Lincoln, Pittsburg, Pa., 111 H
Martin, Henry Fletcher, Pittsburg Pa., M, U

Martin, Richard Spink, Flatbush, N. Y., 10 Madison St.
Meany Shannon Lord, Convent Station, N. J., 11 Alexander St.
Melosh, Henry Jay, Jersey City, N. J., 32 Wiggins St.
Melville, Maurice, Indianapolis, Ind., 21 Edwards Pl.
Metzerott, Kirk Alexander, Washington, D. C., 15 VanDeventer Av.
Michael, Herbert Isaac, East Orange N. J., 21 Edwards Pl.
Middour, Emory Jacob, Quincy, Pa., 10 S E B
Millikin, Severance Allen, Cleveland, Ohio, 24 M D
Molt, Philip, Union Hill, N. J., 19 S W
Moore, Kirk, New York, N. Y., 70 U
Moore, Perry Ervien, Hackensack, N. J., 32 Mercer St.
Mudd, Stuart, St. Louis, Mo., 81 P
Muirhead, John Guild, Newark, N. J., 11 S E B
Mumford, George Hart, Sands Point, N. Y., 41 Univ. Pl.
Murdock, John Edgar, Greensburg, Pa., 19 Univ. Pl.
Nebeker, Eugene Aquila, Santa Monica, Cal., 14 Edwards Pl.
Newburg, Walter Benno, Tompkinsville, N. Y., 26 N E
Nichols, Charles Osborne, Summit, N. J., Edwards Pl.
Niles, Thomas Burnet, New York, N. Y., 32 Wiggins St.
Ohliger, Lewis Philip, Kansas City, Mo., 9 S W B
O'Kane, John Joseph, Jr., Princeton, N. J., 23 Linden Lane
Osmun, John Eliot, East Orange N. J., 19 M D
O'Sullivan, Horace Claflin, New York, N. Y., 42 L
Otis, James Russell Lowell, Bethlehem, Pa., 47 Univ. Pl.
Peacock, Grant Allen, Pittsburg, Pa., 32 Mercer St.
Peacock, Rolland Bedell, Pittsburg, Pa., 32 Mercer St.
Pettit, Donald, Princeton, N. J., R. F. D. No. 3
Phelps, Winthrop Morgan, Bound Brook, N. J., 19 Edwards Pl.
Piel, Walter, New York, N. Y., 31 Univ. Pl.
Pierce, Richard Alexander, St. Louis, Mo., 19 Univ. Pl.
Pierce, Vinton Ulric Dahlgren, Washington, D. C., 15 Edwards Pl.
Pitcairn, Gilbert Ledger, East Orange, N. J., 21 Edwards Pl.
Pope, Marquis, Chicago, Ill., 86 Nassau St.
Queen, James Morley, Glen Cove, N. Y., 90 Nassau St.
Redmond, Geraldyn Livingston, Tivoli, N. Y., 10 L P
Reineman, Gilbert William, Pittsburg, Pa., 15 Univ. Pl.
Rhoads, Jay Roscoe, Philadelphia, Pa., 43 B
Richardson, Herbert James, Memphis, Tenn., Hill
Riedel, Hans Albrecht, Brooklyn, N. Y., 12 Park Pl.
Ritter, James Bradford, Germantown, Pa., 74 U

Roberts, Frank Calvin, Jr., Wynnewood, Pa., 94 B
Robinson, Harold Russell, Newark, N. J., 63 B
Robinson, John Noel, Sewickley, Pa., 51 H
Rockey, Kenneth Henry, West New Brighton, N. Y., 47 N. Tulane St.
Runyon, Paul Mefford, South Orange, N. J., 16 Edwards Pl.
Schwabacher, Herman Schaan, Newark, N. J., 66 U
Selby, Arthur Noel, Oakland, Cal. Hill
Seymour, Lawrence Damrosch, South Orange, N. J., 15 Edwards Pl.
Shanbacker, Frank Morse, Overbrook, Pa., 143 H
Shanley, William Carleton, Jr., New York, N. Y., 15 Univ. Pl.
Shea, Christian Bernard, Pittsburg, Pa., 11 H'm
Sheets, Elmer Allen, Jr., Yonkers, N. Y., G, U
Shepherd, Joseph Henry, Memphis, Tenn., 32 VanDeventer Av.
Shipman, George Marshall, Jr., Belvidere, N. J., 5 A, H
Short, Albert Prettyman, Jr., Wilmington, Del., 29 Edwards Pl.
Smith, Carlton Robinson, Neenah, Wis, 14 Edwards Pl.
Smith, Gordon Sheffield, Bayport, N. Y., Hill
Snowden, Allan Hanson, Baltimore, Md., 13 L
Starr, Isaac, Jr., Chestnut Hill, Pa., 10 Madison St.
Stevens, Murray Hoffman, New York, N. Y., 60 U
Stevenson, Henry Ross, Milroy, Pa., 41 N E
Stillwell, Richard Newcomb, Quincy, Ill., I, U
Stockton, James Roosevelt, Jacksonville, Fla., 11 A, H
Stueck, David Durell, Jersey City, N. J., 28 VanDeventer Av.
Summers, Eugene Franklin, Buffalo, N. Y., 1 E W
Tancock, Montagu Arthur, Omaha, Neb., 12 S W B
Taylor, Chauncey Chittenden, Newburgh, N. Y., 14 Chambers St.
Thomson, John Watson, Jr., Hackensack, N. J., 11 Dickinson St.
Tippetts, Charles Sanford, St. Petersburg, Fla., 38 S E
Tomlinson, Norman Balderston, Morristown, N. J., 15 E W
Towers, Charles Daughtry, Jacksonville, Fla., 11 Univ. Pl.
Townsend, Theodore Walser, New Brighton, N. Y., 10 N M R
Traylor, Michael Gavin, Richmond, Va., Hill
Turner, Donald George, Corning, Ia., H, U
Twaddell, John Pawling, Devon, Pa., 15 Dickinson St.
Twitchell, Pierrepont Edwards, New York, N. Y., 41 B
Tyler, Danford Bassett, South Berlin, Mass., 32 VanDeventer Av.
Uebelacker, Armin Adams, Hackensack, N. J., 102 P
Uhl, James Russell, Wilkes-Barre, Pa., 40 P

Underhill, Andrew Mitchell, South Orange, N. J., 31 Univ. Pl.
Underhill, Jacob Berry, Jr., New York, N. Y., 161 L
van Buren, James Henry, Dunkirk, N. Y., Hill Annex
van Buren, Joseph Nelson, Dunkirk, N. Y., Hill Annex
van der Voort, Henry Ferdinand, Jr., Dunkirk, N. Y., Hill Annex
Van Dyke, Eugene Nelson, Marysville, Pa., 47 N. Tulane St.
Vickery, James Cutler, Washington, D. C., 67 U
Wadsworth, John Vredenburgh, Buffalo, N. Y., 7 E M W
Wall, Edward Barry, Columbus, O., 11 U P
Wells, William Lee, Vicksburg, Miss., 16 Bank St.
White, Walter, Boston, Mass., 28 VanDeventer Av.
Wiese, Archibald Charles, Pittsburg, Pa., 7 Park Pl.
Willoughby, Westel Robinson, Roland Park, Md., 63 U
Wilmarth, Raymond Kolb, Chippewa Falls, Wis., 11 Dickinson St.
Wolfe, Edgar Thurston, Columbus, Ohio, 80 Nassau St.
Wolff, Fred Reginald, New York, N. Y., 15 Edwards Pl.
Wood, Jefferson Kay, New York, N. Y., 16 B

LITT.B. AND B.S. FRESHMEN.....227

CANDIDATES FOR THE C.E. DEGREE.

Bahnsen, Henry Lawrence, Passaic, N. J., 47 Univ. Pl.
Bergen, Leigh Bamber, Paterson, N. J., 15 Univ. Pl.
Berghorn, Walter Henry, Jersey City, N. J., 138 Nassau St.
Blue, Kenneth Voris, Cliffside, N. J., 10 E M W
Boland, La Verne Howard, Syracuse, N. Y., 25 Bank St.
Boyd, Robert James, Jr., Auburn, Neb., 32 VanDeventer Av.
Cardwell, Fowler Hathaway, Portland, Ore., 40 P
Clough, Micajah Pratt, Jr., Lynn, Mass., Hill
Davis, Hartford, New York, N. Y., 47 N. Tulane St.
Fay, Russell Nicholas Brown, Chicopee Falls, Mass., Hill Annex
Field, William Thayer, Newark, N. J., 19 M D
Friesell, William Henderson, Jr., Pittsburg, Pa., 23 D
Garrison, Charles Thornton, Pittsburg, Pa., 73 H
Gillespie, George, Nottingham, Pa., 10 W M W
Glick, George Washington, Jr., Atchison, Kan., 47 Univ. Pl.
Good, Donald Stanley, Hackettstown, N. J., 39 Univ. Pl.
Gould, John Dickason, Indianapolis, Ind., 75 H
Gussenrode, Richard Harvey, New York, N. Y., 15 Univ. Pl.
Harrigan, Philip Braham, New York, N. Y., 9 S E B
Harris, Gordon Lewis, Irvington-on-Hudson, N. Y., Hill
Heath, Francis Rives, Bryn Mawr, Pa., 14 Edwards Pl.

Heyniger, Charles Lambert, Corning, N. Y., 32 Mercer St.
Hinshaw, John Carl Williams, New York, N. Y., 39 Wiggins St.
Kirkpatrick, James Douglas, Jr., Birmingham, Ala., 12 M D
Klotz, Russell Louis, Singac, N. J., 1 N E
Knight, Frederick Hammond, Washington, D. C., 28 VanDeventer Av.
Kock, Charles Edward, Belle Alliance, La., Hill
Larsen, John, Chicago, Ill., 16 S M R
Mandel, Oscar, Grantwood, N. J., 10 E M W
Merritt, Harry Cowles, Jr., Tuckahoe, N. Y., 10 N D
Murray, James Burling, Princeton, N. J., 11 Alexander St.
Parkin, Francis Rogers, New Brunswick, N. J., A. E B
Pemberton, Francis Rawle, New York, N. Y., 68 U
Price, Alfred Kellogg, Oakmont, Pa., 9 N R
Price, Henry Stewart, Brooklyn, N. Y., 41 B
Runk, George Sebastian, Jr., New York, N. Y., 39 Wiggins St.
Rushmore, Ralph, Mamaroneck, N. Y., 47 Univ. Pl.
Shea, Edward Lane, Nashua, N. H., 15 Dickinson St.
Starr, Walter Knickerbocker, Cedar Grove, N. J., R. F. D.
Stewart, Charles Irving, Ossining, N. Y., 15 Univ. Pl.
Strater, Leonard Godfrey, Louisville, Ky., 31 Univ. Pl.
Vanderhoef, Harman Blauelt, New York, N. Y., 14 Chambers St.
Van Horn, Harry Walker, Newtown, Pa., 80 Nassau St.
Weisberg, Herman, Bridgeport, Conn., 17 Alexander St.
Whitcomb, Frank, Jr., New York, N. Y., 1 L P

C.E. FRESHMEN.....45

Students Qualifying for Regular Standing

Andrews, Walter Gresham,	Buffalo, N. Y.,	24 C
Armstrong, Thomas Reeves,	Katherine, Texas,	51 C
Bailie, Raymond Livingstone,	Pittsburg, Pa.,	116 B
Baldwin, Louis Charles Beardslee	Florence, Italy,	15 Park Pl.
Barber, Arthur,	Englewood, N. J.,	31 L
Barnett, Alfred Joseph,	Latrobe, Pa.,	80 P
Bell, Thornton Beach,	Paterson, N. J.,	82 Nassau St.
Biggs, Benjamin Thomas,	Middletown, Del.,	21 S E
Boyd, Thomas Henry,	Portland, Ore.,	11 N D
Carpenter, Deane Houghton,	Minneapolis, Minn.,	2 A, H
Carson, Samuel Pirie,	Chicago, Ill.,	91 P
Carver, Clifford Nickels,	New York, N. Y.,	164 L
Caughey, John Emil,	McKeesport, Pa.,	R, U
Champlin, Francis Malburn,	Bath, N. Y.,	6 W M W
Chapin, Albert Clark,	Lakeville, Conn.,	4 S W B
Christie, Robert Erskine,	New York, N. Y.,	86 Nassau St.
Clapp, James Norton,	Pasadena, Cal.,	22 B
Congleton, Earle,	New York, N. Y.,	43 P
Daly, William Orvine,	Portland, Ore.,	15 M D
Daub, Rudolph Emil,	Pittsburg, Pa.,	8 M D
Dolton, William Ralston,	Trenton, N. J.,	12 S W
Donaldson, Lindsay Montgomery,	New York, N. Y.,	12 S E B
Douglas, Beverly,	Nashville, Tenn.,	54 B
Drummond, Richard Douglas,	New York, N. Y.,	54 H
Dzung, Kenyon Vanlee,	Shao Hing, China,	11 Park Pl.
Emery, Solon Thacher,	Lawrence, Kan., Nassau Inn Apartments	
Flanagan, Arthur Joseph,	Chicago, Ill.,	95 P
Forrestal, James Vincent,	Matteawan, N. Y.,	58 Wiggins St.
Green, Benoni Sherman, Jr.,	Bloomington, Ill.,	12 N E
Green, H. Rumsey,	St. Louis, Mo.,	84 Nassau St.
Harris, Thurmond,	Nashville, Tenn.,	54 B
Heyn, William Ehler,	New York, N. Y.,	8 S W B
Hogan, Romaine,	Los Angeles, Cal.,	20 P
Hostetter, David Herbert, Jr.,	Pittsburg, Pa.,	21 L
Johnson, Miers Cornelius,	Fort Worth, Texas,	21 H'm

Johnston, Homer Klotz, Wichita, Kan., 4 E M W
Kilner, Ehrick Billings, New York, N. Y., 82 Nassau St.
Legendre, James Hennen, New Orleans, La., 101 H
Leslie, Arnett Wells, Minneapolis, Minn., 35 L
Leslie, Frank Paul, Minneapolis, Minn., 35 L
Long, Christopher Sterry, Pontiac, Ill., 20 E W
Long, Thomas Ralston, Uniontown, Ala., 90 Nassau St.
Luke, William Guthrie, New York, N. Y., 80 P
McClellan, Robert Reyburn, Xenia, Ohio, 62 Wiggins St.
MacMahon, John Farren, Chicago, Ill., 95 P
March, Milo Leo, Goshen, Ind., 103 P
May, Edward, Jr., Norfolk, Va., 8 S W B
Merrill, Ralph Whelan, Hinsdale, Ill., 11 W B
Minton, Henry Collin, Jr., Trenton, N. J., 48 U
Moore, Francis Hudson, Richmond, Va., 16 Bank St.
Norwood, George Alexander, Greenville, S. C., 19 Madison St.
O'Sullivan, Daniel Joseph, New York, N. Y., 90 Nassau St.
O'Sullivan, Thomas Cullen, Jr., New York, N. Y., 90 Nassau St.
Parker, Stuart, Boston, Mass., 164 Nassau St.
Porter, Richard Babcock, Kansas City, Kan., 115 H S
Proctor, Carlton Springer, Washington, D. C., 40 Moore St.
Reed, Ralph Edwin, Beaver, Pa., 72 B
Robinson, Guy, New York, N. Y., 64 H
Roddey, William Joseph, Jr., Rock Hill, S. C., 32 VanDeventer Av.
Russell, Archibald Douglas, Jr., Princeton, N. J., 27 C
Shively, James Cole, Fayetteville, Pa., 120 Alexander St.
Slee, James Noah, New York, N. Y., 62 '79 H
Smith, Kenneth Maxwell, Rhinebeck, N. Y., 10 N D
Stahl, Lionel Adolf, San Francisco, Cal., 8 L P
Steinert, Walter George, New York, N. Y., 81 B
Swineford, Jerome Alfred, Madison, Wis., 35 S E
Taeusch, Carl Fritz, Wapakoneta, Ohio, 5 E M W
Turtle, William O'Hara, Pensacola, Fla., 37 N E
Updike, Gershm Horace, Trenton, N. J., 3 A, H
Van Olinda, Douglas Radcliff, Yonkers, N. Y., 190 Nassau St.
Williams, Richard, Philadelphia, Pa., 131 L
Williams, William Charles Roberts, Wilkes-Barre, Pa., 30 P
Winant, John Gilbert, New York, N. Y., 7 U P
Woodrow, Fitz William McMaster, Columbia, S. C., 13 W W

STUDENTS QUALIFYING FOR REGULAR STANDING.....75

Special Students

Not Candidates for a Degree

Burke, Alan Thomas,	Buffalo, N. Y.,	42	N	E
Drullard, Alfred Bennett,	Montclair, N. J.,	8	U	P

Specials.....2

Students Pursuing Partial Courses

Not Candidates for a Degree

Morgan, William Thomas,	Springfield, Mass.,	108	H	S
Walker, Elmer,	Trenton, N. J.,	34	A	S
Workman, Robert Du Bois,	Leaman Place, Pa.,	7	B	S

Students Pursuing Partial Courses.....3

GENERAL SUMMARY

Officers of Instruction and Administration

Trustees,	32
Faculty and Instructors,	192
Officers of Administration,	15

Students

Graduate School

Fellows,	42	
Graduate Scholars,	5	
Other Graduate Students,	101	
		148

School of Electrical Engineering

Second Year,	3	
First Year,	8	
		11

Undergraduates

Senior Class

A.B.,	145	
Litt.B.,	111	
B.S.,	29	
C.E.,	27	
		312

Junior Class

A.B.,	100	
Litt.B.,	98	
B.S.,	24	
C.E.,	41	
		263

Sophomore Class		
A.B.,	128	
Litt.B. and B.S.,	183	
C.E.,	37	
		348
Freshman Class		
A.B.,	137	
Litt.B. and B.S.,	227	
C.E.,	45	
		409
STUDENTS QUALIFYING FOR REGULAR STANDING,		75
SPECIALS,		2
STUDENTS PURSUING PARTIAL COURSES,		3
		1571
Less names counted twice		3
Total for the year 1912-1913,		1568

SUMMARY OF STUDENTS BY STATES

New York	376	Washington	6
Pennsylvania	321	Iowa	5
New Jersey	318	South Carolina	5
Maryland	52	Wisconsin	5
Ohio	50	New Hampshire	4
Illinois	36	Arkansas	3
Missouri	35	Mississippi	3
Massachusetts	32	Nebraska	3
District of Columbia	25	Idaho	1
Connecticut	23	New Mexico	1
Tennessee	22	North Dakota	1
Kentucky	21	Oklahoma	1
Indiana	16	South Dakota	1
Minnesota	16	Utah	1
Texas	15	Vermont	1
California	14		
Michigan	14	Japan	6
Delaware	13	Canada	5
Colorado	12	China	2
West Virginia	12	Ireland	2
Virginia	11	Wales	2
Florida	10	Ceylon	1
Kansas	10	France	1
Oregon	8	Italy	1
Rhode Island	8	Syria	1
Alabama	7	Turkey	1
Georgia	7	West Indies	1
Louisiana	7		
North Carolina	7	**Total,**	1568
Maine	6		

ABBREVIATIONS

A S, Alexander Hall, Seminary.
B, Blair Hall.
B S, Brown Hall, Seminary.
C, Campbell Hall.
E B, East Entry, David Brown Hall.
E M W, East Middle Entry, Witherspoon Hall.
E W, East Entry, Witherspoon Hall.
H S, Hodge Hall, Seminary.
H, Holder Hall.
H'm, Hamilton Hall.
L, Stafford Little Hall.
L P, Lower Pyne Building.
M D, Middle Entry, Albert B. Dod Hall.
N, Nassau Hall.
N D, North Entry, Albert B. Dod Hall.
N E, North Entry, Edwards Hall.
N M R, North Middle Entry, Reunion Hall.
N R, North Entry, Reunion Hall.
N W, North Entry, West College.
P, Patton Hall.
S D, South Entry, Albert B. Dod Hall.
S E B, South East Entry, David Brown Hall.
S E, South Entry, Edwards Hall.
S M R, South Middle Entry, Reunion Hall.
S R, South Entry, Reunion Hall.
S W, South Entry, West College.
S W B, South West Entry, David Brown Hall.
U, University Hall.
U P, Upper Pyne Building.
W B, West Entry, David Brown Hall.
W M W, West Middle Entry, Witherspoon Hall.
W W, West Entry, Witherspoon Hall.
'79 H, Seventy-nine Hall.

DIRECTORY

OF OFFICERS AND STUDENTS IN ALL DEPARTMENTS OF THE UNIVERSITY

The name of every officer is printed in SMALL CAPITALS.

The names of students are followed by the designation of their several classes (*f*, Fellow; *g*, Graduate Student; *ee*, School of Electrical Engineering; *Sr.*, Senior; *Jr.*, Junior; *So.*, Sophomore; *Fr.*, Freshman; *q*, Student Qualifying for Regular Standing; *Sp.*, Special Student; *Par.*, Student Pursuing Partial Course); the name of each undergraduate is followed also by an abbreviation indicating the degree for which he is a candidate, viz., *a*, Bachelor of Arts; *l*, Bachelor of Letters; *s*, Bachelor of Science; *ce*, Civil Engineer.

The abbreviations of the residences of officers and students are found on page 472.

Abbett, L., Jr., *Fr. a* 90 P
ABBOTT, F. F., *Professor*
Fitz Randolph Rd.
Abeles, C. T., Jr., *Fr. l* or *s*
25 Bank St.
Ackerman, M. S., Jr., *Fr. l* or *s*
19 Univ. Pl.
Adams, C. R., *So. l* or *s* 10 W B
ADAMS, E. P., *Professor*
12 Nassau St.
Adams, F. D., *Sr. l* 3 N D
Adams, J. A., *So. l* or *s* A, Hill
Adams, J. F., *So. l* or *s* 2 B, C
Adams, P. D., *So. ce* 2 C, H'm
Adams, P. E., *Sr. a* 11 L P
Adams, R. McC., Jr., *Sr. a* 11 N D
Adler, J. O., *Jr. a* 62 B
ADRIANCE, W. M., *Ass't Professor*
Princeton-Lawrenceville Rd.
(R. F. D. 2)
Agar, J. G., Jr., *Jr. a* 84 P
Agar, W. M., *Fr. l* or *s*
15 Univ. Pl.
Alexander, J. M., *Jr. a* 5 E M W
ALEXANDER, J. W., *Trustee*
New York, N. Y.
ALEXANDER, J. W., II, *Instructor*
24 Madison St.
Alexander, V. W., *Fr. a* Hill
Allee, W. C., *So. a* 73 P
Allen, C. C., *So. a* D, W B
Alling, E. L., *Jr. s* 62 C
Allison, J. M. S., *g* 10 Nassau St.
Alton, W. C. W., *So. a* 3 B, H'm
Alyea, E. D., *Fr. a* 1 S D
Ames, B. A., *Fr. l* or *s* 35 P
Amy, E. F., *f* 9 Madison St.
Anderson, J. B., III, *So. a* 11 B
Anderson, W. E., *f* 33 Bank St.
Andrews, J. E., *Jr. a* 306 H'm
Andrews, W. G., *q* 24 C
Annin, R. O., *Sr. a* 29 Bank St.
Apgar, H., *So. l* or *s* 2 E M W
Applegate, E. G., *Sr. s*
Trenton, N. J.
Armour, W., *Jr. a* 14 C
Armstrong, C. V., *Jr. l* 61 L
Armstrong, O., *Jr. l* 6 S E B

Armstrong, H. F., *Fr. a* 31 Univ. Pl.
Armstrong, J. S., *fr. l* or *s* 48 Mercer St.
Armstrong, T. R., *q* 51 C
Arnold, W. C., II, *So. a* 11 E W
Arthur, R. P., *So. l* or *s* 17 S M R
Atha, S. K., *So. l* or *s* 6 N D
Atterbury, B. B., *Fr. l* or *s* 81 P
Atwood, F. H., *Sr. a* 5 S W B
Auger, C. L., Jr., *Sr. ce* 22 S E
Austin, J. G., *So. a* 122 L
AXSON, S., *Professor* 10 Nassau St.
AYMAR, J. W., *Instructor* Lake Rd. (P.O. Box 222).
Azoy, A. C. M., *Jr. l* 66 H

Bagby, T. E., *Sr. a* 3 E B
Bahnsen, H. L., *Fr. ce* 47 Univ. Pl.
Bailey, F. W., *Fr. l* or *s* 73 H
Bailey, J. W., Jr., *So. l* or *s* 106 P
Bailie, R. L., *q* 116 B
Baiter, R. W., *Sr. ce* 13 N E
Baker, C. D., *Sr. a* 42 '79 H
Baker, D. Jr., *Sr. a* 3 N D
Baker, D. B., *Fr. l* or *s* 10 E W
Baker, D. R., *Jr. l* 24 B
Baker, H. A. H., *Jr. l* 82 Nassau St.
Baker, J. A., Jr., *So. a* 2 D, H
Baker, J. D., *Fr. l* or *s* 11 A, H
Baker, J. I., *Jr. l* 52 L
Baker, J. M., *Fr l* or *s* 35 P
Baker, J. S., *So. a* 16 C
Baker, L. A., *Sr. a* 8 B, H
Baker, M. L., *So. a* 6 B
Baker, W. M., *Sr. l* 134 L
Bakewell, A. C. Jr., *Jr. a* 43 L
Baldwin, L. C. B., *q* 15 Park Pl.
Baldwin, R. D., *Sr. a* 3 S R
Ballin, H. R., *So. ce* 4 M D
Bamman, E. B., *Fr. l* or *s* 27 Chambers St.
Banigan, C., *Fr. a* 13 M D
Bannerman, E. P., *Jr. a* 36 P
Barba, P. S., *Fr. l* or *s* 48 Mercer St.
Barber, A., *q* 31 L
Barber, L. H., Jr., *Fr. l* or *s* 39 Univ. Pl.
Barber, T. P., *So. a* 73 B
Barber, W. A., Jr., *So. l* or *s* 53 C
Barbour, F. K., *Fr. a* 4 A, C
Bard, R., *So. l* or *s* 7 S W B
Barnes, B. E., *Jr. l* 22 P
Barnett, A. J., *q* 80 P
Barnett, H. H., *Fr. l* or *s* 31 Univ. Pl.
Barnett, W. L'E., *Sr. s* 12 '79 H
Barr, J. McF., *Fr. a* 12 H'm
BARR, J. W., Jr., *Trustee* Louisville, Ky.
Barr, W. M., *So. ce* 22 '79 H
Barras, W. A., *Jr. a* 32 N E
Bartholomew, O. A., *Jr. l* 2 A, H
Bartlett, J. K., Jr., *Sr. l* 91 H
Bashinsky, L. E., *Sr. l* 20 M D
Baskerville, R. W., *g* 15 VanDeventer Ave.
BASORE, J. W., *Ass't Professor* 15 N D
Bass, W. H., *Jr. l* 42 H
Battles, W. H., *So. l* or *s* 144 Nassau St.
Bauhahn, R. W., *Jr. a* 138 Nassau St.
BAXTER, E. B., *Instructor* 6 N E B
Beall, E. C., *So. l* or *s* 144 H
BEAM, J. N., *Ass't Professor* 52 Bayard Lane
Beatty, J. W., Jr., *Jr. s* 51 L
Beatty, W. H., *Fr. l* or *s* 93 H
Bechtel, E. C., *Sr. a* 1 N M R
Beck, J. M., *Jr. l* 102 H
Beetle, R. D., *f* 46 Park Pl.
Beger, J. H., Jr., *Jr. ce* 143 L
Belknap, M., *Sr. l* 44 '79 H
Bell, J. F., Jr., *Sr. l* 5 E W
Bell, S. D., *Sr. a* 42 '79 H
Bell, T. B., *q* 82 Nassau St.
Beltzhoover, M. R., *So. a* 15 Bank St.
BENDER, H. H., *Ass't Professor* 23 Bank St.
Bennett, A. A., *f* 33 Bank St.
Bennett, J. H., *So. l* or *s* Z, U
Benson, R. G., *So. l* or *s* 183 L
Benton, A. F., *Fr. a* 142 L
Benton, H. G., *Sr. ce* 142 L
Bergen, L. B., *Fr. ce* 15 Univ. Pl.
Berghorn, W. H., *Fr. ce* 138 Nassau St.

Berky, H. W., *Sr. a* 3 S R
Berry, A. D., *Sr. a* 72 P
Best, T. G., *So. l* or *s* 55 C
Bevin, A. W., *Fr. l* or *s*
10 Madison St.
Beyer, H. H., *Jr. l* 2 E M W
Bickel, W. F., *Sr. a* 123 H
BICKFORD, P. R., *Instructor*
30 VanDeventer Ave.
Bickham, W. D., *Sr. a* 54 L
Bicknell, L. M., *g* 13 A S
Biddle, N., *Fr. l* or *s* 15 Univ. Pl.
Biddle, O. T., *Fr. l* or *s* 9 S W
Biggs, B. T., *q* 21 S E
Billings, G. M., *Jr. l* 98 B
Bingham, A. B., *Fr. l* or *s*
12 N M R
Bingham, C. E., *Sr. a* 18 S W
Binns, R. H., Jr., *Sr. l* 60 P
Bird, C. R., *Jr. ce* 14 Moore St.
Bird, E. P., *Fr. l* or *s* 4 A, C
Birdsall, G. J. T., *Fr. l* or *s*
11 Univ. Pl.
Bissell, G. N., *Sr. l* 70 P
Biswanger, B. E., *Jr. a* 18 E W
Blackburn, J. B., *Jr. a* 74 H
Blair, F. P., III, *Fr. a*
11 Dickinson St.
Blair, J. P., Jr., *Jr. a* 112 B
BLAU, M. F., *Professor*
27 Bank St.
Bleecker, B. DeW., *Jr. a* 3 S E B
Bleecker, T. B., *So. ce*
82 Nassau St.
Blodgett, R. L., *So. l* or *s* 21 C
Blue, K. V., *Fr. ce* 10 E M W
Bluethenthal, A., *Sr. l* 11 S D
Bobbs, J., *Fr. l* or *s*
17 Edwards Pl.
Boker, C. F., Jr., *So. a*
82 Nassau St.
Bol, C., *Jr. s* 38 N E
Boland, La V. H., *Fr. ce*
25 Bank St.
Boldt, H. St. J., Jr., *Jr. a* 13 U P
Bolmer, M. T., *Sr. ce* 30 N E
Bolmer, W. B., *Jr. ce*
Rocky Hill, N. J.
Bolton, F. N., *Jr. l* 66 L
Bongiorno, P., *So. a* 9 S M R
Bonnell, W. L., *Sr. l* 1 W M W
Bonner, A. S., *Sr. ce* 62 H
Bonner, K., *Jr. l* 52 B
Bonsall, G. H., Jr., *So. a* 5 A, C
Boon, W. R., *Sr. l* 1 W M W
Booth, A. L., *So. l* or *s* 3 A, C
Borden, W. S., *So. a* 10 S W
Boughner, J. K., *Sr. a* 5 N M R
Bouton, G., *Sr. a* 5 S D
Bower, W., *Fr. l* or *s* N, U
BOWMAN, A. A., *Professor*
272 Nassau St.
Bowman, S. A., *Fr. a*
17 Edwards Pl.
Bowman, W. H., Jr., *Fr. l* or *s*
93 P
Boyd, J. H., *Jr. l* 31 '79 H
Boyd, R. J., Jr., *Fr. ce*
32 VanDeventer Ave.
Boyd, T. H., *q* 11 N D
Boyer, M. S., *So. a* 101 B
Boyle, R., Jr., *So. l* or *s* E, E B
BRACKETT, C. F., *Professor*
14 Prospect Ave.
Bradley, W. E., *Fr. l* or *s*
15 Univ. Pl.
Bradley, W. R., *g* 308 H S
BRAUN, F. A., *Instructor*
18 Bank St.
Brazelton, T. B., *So. l* or *s* 42 P
Brenner, C. D., *So. a* B, W B
Brewster, W. C., *Sr. ce* 20 N E
Briggs, T. C., *Jr. l* 11 S W B
Brigham, C. C., *f* 8 N E
Brinton, W., Jr., *Jr. a* 32 H
Brokenshire, C. D., *f* 17 Olden St.
Brooks, O. R., *Jr. a* 4 E M W
Brotemarkle, R. A., *Fr. a* 8 N M R
Brower, B., *So. a* 104 P
Brown, B. B., *Jr. a* 65 B
Brown, C. R., *f* Merwick
BROWN, G. D., *Ass't Reference Librarian* 1 S W B
Brown, G. R., Jr., *Jr. l* 1 C, H'm
Brown, H. G., *Fr. a* 10 W M W
Brown, L., *Fr. l* or *s*
15 Edwards Pl.
Brown, M. McI., *Sr. a* 12 A, H
Brown, W. H., *So. a* 17 S E
Brown, W. W., *Sr. a* 6 N W
Browne, G. F., *g* 31 A S
Bruce, J., *Jr. l* 51 '79 H

Bruen, A. McW., *Fr. l* or *s* 5 A, H
BRÜNNOW, R. E., *Professor*
"Edgehill", Stockton St.
Bryan, A. R., *Sr. a* 3 W B
Bryan, G. MacW., *Sr. ce* 11 L P
Bryant, C. H., *So. a* 1 A, H
Buchanan, E. C., *Fr. l* or *s*
43 Vandeventer Ave.
Buchanan, E. P., *Sr. s* 13 S W
Buck, J. W., *Sr. l* 1 B
Buckley, C. P., *So. a* 103 H
BUFFUM, D. L., *Professor*
117 Alexander St.
Bullock, B., III, *Fr. a* 83 B
Bullock, R. A., *Jr. a* 33 S E
Bunn, C., *Jr. a* 8 W B
Bunnell, M. J., *Fr. l* or *s*
200 Nassau St.
Bunzel, E. E., *Jr. l* 2 E B
Burford, W. H., *Fr. l* or *s*
11 Univ. Pl.
Burke, A. T., *Sp.* 36 N E
Burke, W. J., III, *Fr. a*
31 Univ. Pl.
Burns, R. W., *Fr. l* or *s* 28 C
Burr, W. J., Jr., *Fr. l* or *s* 61 U
Burrill, D., Jr., *Jr. a* 22 H'm
Butler, A. M., *Fr. l* or *s* 12 H'm
BUTLER, H. C., *Professor* Merwick
Butler, P., Jr., *Jr. l* 8 W B
Butler, W. J., *Fr. l* or *s*
11 Dickinson St.
Butterworth, J. E., *Fr. l* or *s*
40-50 P

CADWALADER, J. L., *Trustee*
New York, N. Y.
Caine, T. J., *So. ce* 11 S M R
Calam, H. M., *Fr. l* or *s* 68 L
Caldwell, W. T., *So. a* 1 S M R
Calhoun, B. A., *Sr. a* 5 W M W
Callery, W., *Sr. a* 9 B
Campbell, A. D., Jr., *g*
108 Mercer St.
Campbell, C. L., *Fr. l* or *s*
43 VanDeventer Ave.
Campbell, D. W., *Jr. s* 34 P
Campbell, R. N., *So. a* 9 N W
Canda, H. G., *Jr. l* 3 C, H'm
CAPPS, E., *Professor*
150 Fitz Randolph Rd.
CAPPS, J. H., *Assistant*
47 N. Tulane St.
Cardwell, F. H., *Fr. ce* 40 P
Carey, J. M., *Fr. l* or *s* 62 P
Carlile, J. S., *g* 20 A S
CARNOCHAN, J. McD., *University Physician* The Infirmary
Carpenter, D. H., *q* 2 A, H
Carpenter, R. L., *Jr. a* 7 B, H
Carpenter, W. S., *f* 24 Bank St.
Carruthers, D. W., *So. a*
4 W M W
CARSON, J. R., *Instructor*
199 Nassau St.
Carson, S. P., *q* 91 P
Carter, E S., *Fr. a* 1 A, H'm
Carter, H. A. P., *Jr. a* 153 L
Carter, O. B., *So. l* or *s* 101 B
Carver, C. N., *q* 164 L
Carty, J. R., *Fr. l* or *s*
53 Univ. Pl.
CARY, E., *Instructor* 15 S D
CARY, L. R., *Instructor*
36 Wiggins St.
Castle, E. W., *g* 75 U
Cator, W. W., Jr., *Fr. l* or *s*
14 Park Pl.
Caughey, J. E., *q* R, U
CAWLEY, R. S., *Department Librarian* Guyot Hall
Chaffee, A. R., *g* 307 H S
Champlin, F. M., *q* 6 W M W
Chapin, A. C., *q* 4 S W B
Chapin, H. W., *So. l* or *s* 5 E B
Chaplin, M., *Sr. l* 171 L
Chaplin, R. T., *Fr. l* or *s*
43 VanDeventer Ave.
Chapman, E. N., *Jr. l* 21 H
Chester, W. M., *Sr. l* 7 S E
Chew, W. B., Jr., *So. l* or *s* 6 B
Childs, E. E., *Fr. l* or *s* 12 S W B
Christie, J. R. Jr., *Sr. l* 28 S E
Christie, R E., *q* 86 Nassau St.
Church, G. M., *So. l* or *s* 22 H
Church, R. N. L., *Jr. a* 186 L
Claiborne, R. W., *g* Merwick
Clair, V., *Fr. a* 76 U
Clancy, W. P., *So. l* or *s* 310 H'm
Clapp, D. B., *Jr. s* 31 B
Clapp, J. N., *q* 22 B
Class, T. S., *Sr. l* 32 P

CLEMONS, H., *Reference Librarian* 4 E W
Cleveland, J. H., *So. a* 3 M D
Cleveland, R. L., *Fr. l* or *s* 161 L
Clifford, G. J., *Jr. ce* 20 P
Close, F. D., *Sr. s* 52 P
CLOSE, G. F., *Editor of Official Publications, Assistant to the Secretary.* Nassau Hall
Clough, M. P., Jr., *Fr. ce* Hill
COAN, W. J., *Proctor* Nassau Hall
Coffin, P. L., *Sr. a* 15 N M R
Cohoon, J. W., *g* 231 Nassau St.
Coleman, G. D., *Sr. a* 64 '79 H
Collins, G. N., *Jr. s* 42 H
Collins, G. W., *Jr. s* 12 B
COLLINS, V. L., *Professor* 214 The Western Way
Colt, J. M., *Jr. a* 17 S W
Compton, K. T., *f* Merwick
Compton, R. P., *So. l* or *s* 23 P
Compton, W. M., *g* Merwick
Condit, K. H., *Sr. ce* 14 S E
CONEY, J. H., *Professor* Bayles Farm
Conger, A. M., *g* 4 A S
Congleton, E., *q* 43 P
CONKLIN, E. G., *Professor* 139 Broadmead
Connett, W. B., *Jr. l* 6 U P
Cook, A. M., *Sr. s* 17 S E
Cook, L. M., *Jr. a* 94 P
Cook, L. W., *So. ce* 12 S M R
Cooke, C. H., *g* 3 A, H
COOKE, H. L., *Ass't Professor* 104 Mercer St.
Cooledge, N. P., *Sr. a* 9 E B
Cooley, S. M., *So. l* or *s* 152 Nassau St.
Cooper, A. W., *Sr. l* 107 P
Cooper, L. B., *So. l* or *s* 31 C
Cooper, S. L., *Fr. l* or *s* 112 H
Copeland, G. H., *So. a* 33 Bank St.
Cornelius, C. O., *Sr. a* 162 L
CORNWALL, H. B., *Professor* 12 Morven St.
Correll, E. S., *Jr. ce* 6 S R
Corson, D. N., *Fr. l* or *s* 18 M D
CORWIN, E. S., *Professor* 115 Prospect Ave.
COSGROVE, J. S., *Assistant to the Treasurer* University Offices
COTTRELL, W. R., *Superintendent of Circulation, University Library* 1 Nassau St.
Coulter, E. B., *Jr. l* 134 H
COVINGTON, H. F., *Professor* 34 Edgehill St.
Cowan, H. E., *So. l* or *s* 9 W W
Cowan, R. S., *So. l* or *s* 2 U P
Cowan, S. DuB., *Sr. l* 41 H
Cowen, E. A., *Sr. a* 22 L
Cox, L., *So. ce* 9 E W
Coxe, W. H., *Sr. ce* 12 H
Craig, A. B., *So. a* 44 C
Craig, A. M., *Jr. ce* 2 M D
Craig, D., *Jr. ce* 33 L
Cramer, K. F., *Fr. l* or *s* 112 Mercer St.
Crandall, I. B., *f* 5 Nassau St.
Crawford, A., *So. ce* 312 H'm
Crawford, W. C., Jr., *Fr. l* or *s* 14 Park Pl.
CRITCHLOW, F. L., *Ass't Professor* 132 Mercer St.
Critchlow, M. M., *Sr. a* 6 E M W
Crocker, D. R., *Fr. a* 10 N W
CROLL, M. W., *Ass't Professor* 6 N R
Cromwell, O. E., *Fr. a* 13 C
Crooks, P. K., *Sr. ce* 15 N W
Crosby, K. W., *So. a* 51 B
Cross, E. J. D., Jr., *Jr. a* 43 '79 H
Cross, H. C., *Fr. a* 43 B
Crouse, C. B., *Fr. l* or *s* 93 P
Cruger, N. W., *So. ce* 6 W W
Cudahy, G. C., *So. a* 84 P
Cull, S. T. W., *Jr. a* 53 P
Culolias, N. C., *So. a* 4 S W
Cumbler, G. W., *So. l* or *s* 122 H
Cumming, J. B., Jr., *So. l* or *s* 23 '79 H
Cummings, H. M., *f* Merwick
Currier, H. G., Jr., *Fr. l* or *s* Hill
Currier, J. R., *Sr. l* 3 S D
Curry, A. B., Jr., *g* 215 H S
Curtis, A. P., *Sr. a* 18 N W
Curtis, R. R., *Jr. a* 62 Hodge Rd.
Curtis, W. J., Jr., *Jr. l* 12 B
Cutrer, J. C., *So. a* 64 L

DAHLGREN, U., *Professor*
204 Guyot Hall
Dake, E. V., *So. l or s* 6 W B
DALE, J. K., *Assistant*
Cannon Club
DALE, N. C., *Assistant* 6 Bank St.
Daly, W. O., *q* 15 M D
Dane, J. W. B., *Fr. a*
164 Nassau St.
Danenhower, J. W., *Fr. l* or *s*
25 Bank St.
Danser, W. S., *Sr. a* 43 B S
Darlington, F. G., Jr., *Jr. ce*
3 U P
Daub, R. E., *q* 8 M D
Davies, T. J., *Fr. a* 10 S R
Davis, C. O., *So. a* 7 N W
Davis, H., *Fr. ce* 47 N. Tulane St.
Davis, N. P., *Fr. a* 58 Mercer St.
DAVIS, R., *Superintendent of Grounds and Buildings*
University Offices
Davis, W. F., *Sr. s* 13 S E
Davison, J. V., Jr., *So. l* or *s*
181 L
Davison, W. C., *Sr. a* 5 W M W
Davy, W. M., *Fr. l or s* 50 U
Dawbarn, R. H., *Fr. a* 71 U
Dawes, N. B., *Fr. l* or *s*
19 Univ. Pl.
Day, E. M., *Jr. a* 3 S E B
Day, E. W., Jr., *Fr. a* 93 H
Deacon, J. G., *So. l* or *s* 114 H
Dean, H. F., *Jr. s* 112 L
DEAN, L. R., *Instructor*
15 Bank St.
Dechert, J. F., *Fr. l or s*
19 Madison St.
deCoppet, E. A., *So. l* or *s* 115 B
Decker, E. S., *Fr. l* or *s*
21 Bank St.
DEDERICK, L. S., *Instructor*
23 William St.
Deferrari, R. J., *g* 6 Bank St.
Deitsch, E. J., Jr., *Fr. a* 14 B
DeLacy, G. C., Jr., *Fr. a* Hill
de la Reussille, L. E., Jr., *Sr. l*
3 B, H
Dell, W. S., *Fr. a* 51 H
Dellinger, J. H., *f* 41 Park Pl.
DeLong, O. A., Jr., *Fr. l* or *s*
32 VanDeventer Ave.
Demaree, D. R., *Fr. a*
47 N. Tulane St.
de Mercado, F. E., *Jr. l* 112 L
Deming, R., Jr., *So. l* or *s*
86 Nassau St.
Dennis, H. K., *g* Hightstown, N. J.
DePorte, J. V., *g* 36 Park Pl.
Devereux, J. H., Jr., *So. l* or *s*
71 P
Dewar, J. B., *Jr. l* 172 L
Dewey, H. L., *Sr. s* 9 N E
DEWITT, J., *Trustee*
Princeton, N. J.
deWitt, W. L., *Jr. ce*
32 VanDeventer Ave.
Dexter, A. L., *Jr. a* 12 W B
Deyo, W. H., *Fr. l* or *s*
19 Edwards Pl.
Dickey, W. H., *Sr. a* 15 C
DICKSON, B. L., *Infirmarian*
The Infirmary
Diller, H. E., *Fr. a* 30 U
Dimon, F. K., *So. l* or *s* 40 N E
Dinsmore, A. L., *Fr. l* or *s* Hill
Dinsmore, L. C., *Jr. l* 11 S W B
Disbrow, F. N., *Jr. a* 84 B
Dixon, H. W., *Jr. ce* 29 Bank St.
DIXON, J., *Trustee* Trenton, N. J.
Dixon, M. M., *Sr. l* 6 E M W
Dixon, T., Jr., *Jr. a* 9 E M W
Dixon, W., *Fr. l* or *s* 9 Park Pl.
Dixon, W. B., *So. a* 144 Nassau St.
Dodd, A. D., *So. l* or *s* 4 N R
Dodd, E. D., *Fr. l* or *s* 16 B
Dodd, W. F., *Fr. l* or *s* 10 S D
Dodds, H. W., *g* 44 A S
Dodge, W. W., Jr., *Fr. l* or *s*
47 U
Dolton, W. R., *q* 12 S W
Donaldson, B. McN., *Sr. a* 3 E B
Donaldson, L. M., *q* 12 S E B
Doolittle, J. T. A., *So. a*
144 Nassau St.
Dort, R. B., *So. a* 90 Nassau St.
Doty, W. S., *So. a* 24 P
Douglas, B., *q* 54 B
Douglas, B., Jr., *Fr. l* or *s* 28 C
Douglas, D. B., *Jr. l* 52 C
Douglass, E. L., *Sr. a* 9 W B
Dowell, J. N., *Fr. l* or *s* 73 U

Downs, I. R., *Jr. a* 111 B
Doxsee, C. W., *f* 9 Madison St.
Drinker, P., *So. l* or *s* 34 C
Driver, E. S., *So. a* 308 H'm
Drullard, A. B., *Sp.* 8 U P
Drummond, R. D., *q* 54 H
DuBarry, J. N., III, *Jr. a* 52 C
DuBois, R. J., *Jr. a* 19 N W
DUFFIELD, D. W., *Superintendent of Printing and Binding, University Library*
DUFFIELD, H. G., *Treasurer* University Offices
DUGAN, R. S., *Ass't Professor* 20 Murray Pl.
Dulles, A. W., *Jr. a* 17 S W
Dunlap, C. C., *Sr. s* 5 M D
Dunlap, W. C., *So. ce* 40 S E
Dunn, A. C., *Fr. a* 8 C, H
Dunn, C. E., Jr., *So. a* 13 S M R
Dunn, F. S., *Jr. l* 11 H
Dunn, J. M., *So. a* 8 C, H
Durflinger, C. W., *q* 60 U
DURHAM, D. B., *Instructor* 72 Univ. Pl.
Dwelle, V. A., *Jr. l* 53 B
Dyckman, F. H., *Jr. l* 61 '79 H
Dzung, K. V., *q* 11 Park Pl.

Earle, H. B., *Sr. ce* 10 N E
Earle, L. de la M., *So. a* 7 L P
EASTMAN, A. S., *Assistant* 26 Bank St.
Eberstadt, F., *Sr. a* 24 S E
Eddy, R. C., *Jr. ce* 1 E M W
Edgar, W. LeR., *Fr. a* 15 Univ. Pl.
Edwards, D. R., *g* 24 A S
EDWARDS, P. N., *Instructor* Elm Club
Efird, O. O., *g* 6 Bank St.
EISENHART, L. P., *Professor* 22 Alexander St.
Elder, E. E., *g* 42 A S
ELDERKIN, G. W., *Ass't Professor* Nassau Club
Ellicott, V. LeM., *So. l* or *s* 7 W W
Elliott, D. A., *So. l* or *s* 9 L P
ELLIOTT, E., *Professor* Absent on leave
Elliott, H. P., *Jr. l* 61 '79 H
Ellis, D. R., *Fr. l* or *s* Hill
Ellis, W. M., *So. l* or *s* 90 Nassau St.
Elsworth, O. B., *Jr. l* 151 L
Emery, S. T., *q* Nassau Inn Apartments
Emery, T., *So. a* 90 Nassau St.
Emmons, T., *Jr. a* 153 L
Enck, W. K., *Jr. a* 6 M D
Erben, P. vanR., *Sr. ce* 9 N M R
Erdman, C. P., *So. a* 10 P
Evans, G. D., *Fr. a* Hill
Evans, J. A., Jr., *So. a* 74 B
Evans, M. C., *Fr. a* 10 A, H
Evans, R. D., *Fr. a* 32 Wiggins St.
Eves, W., III, *ee* 6 S M R
Ewing, H. G., *Jr. l* 21 L

Faber, E. L., *So. l* or *s* 2 S E B
Faber, J. H., *So. ce* 3 E M W
Faeth, G. E., *So. l* or *s* 6 S W B
Farr, F. S., *Sr. a* 13 '79 H
FARR, M. S., *Ass't Professor* 20 VanDeventer Ave.
FARRAND, W., *Trustee* So. Orange, N. J.
Farrell, F. L., *Fr. l* or *s* 46 Wiggins St.
Fauntleroy, G. R., *Sr. l* 15 L P
FAUVER, E., *Ass't Professor* 158 Mercer St.
Fay, R. N. B., *Fr. ce* Hill Annex
Fendrick, P. O., *Fr. l* or *s* 19 Univ. Pl.
Ferguson, D. Van D., *Fr. a* 47 Univ. Pl.
Ferguson, E., *Fr. a* 47 Univ. Pl.
Ferree, R. B., Jr., *Fr. l* or *s* 39 Univ. Pl.
Ferris, L., *Sr. l* 76 H
FETTER, F. A., *Professor* 121 Broadmead
Field, W. T., *Fr. ce* 19 M D
Fielder, C. G., *Jr. l* 14 Park Pl.
Fillebrown, W. Y., *Fr. l* or *s* 15 Dickinson St.
FINE, H. B., *Dean of the Departments of Science* Absent on leave

FINNEY, J. M. T., *Trustee* Baltimore, Md.
Finney, J. M. T., Jr., *So. l* or *s* 72 H
Fish, R. T., *Sr. l* 71 H
Fisher, D. K. E., Jr., *Sr. l* 82 H
Fisher, H. E., *Fr. a* 29 Bank St.
Fiske, T., *Jr. l* 112 L
Flanagan, A. J., *q* 95 P
Fleece, C. L., *f* Merwick
Fleming, D., III, *So. a* 12 E B
FLEMING, M. C., *Trustee* New York, N. Y.
Flint, W. W., Jr., *g* 6 Bank St.
FOGEL, P. H., *Ass't Professor* 8 S W
Forbes, G., *Sr. a* 34 L
Forbes, H., *Sr. l* 131 H
Ford, E. S., *Sr. l* 14 N W
Ford, F., *Sr. l* 42 Cleveland Lane
FORD, H. J., *Professor* 42 Cleveland Lane
Forney, L. G., *Fr. l* or *s* S, U
Forrestal, J. V., *q* 58 Wiggins St.
FOSTER, W., *Professor* 41 Morningside Ave.
Fowler, J. W., *Sr. ce* 28 N E
Fox, A. E., *Sr. a* 3 W B
Fox, J. H., *So. l* or *s* 311 H'm
Fox, J. M., Jr., *So. ce* 144 Nassau St.
Fox, S. M., Jr., *So. ce* 90 Nassau St.
Fox, W. S., *Ass't Professor* 70 Univ. Pl.
France, J., *Jr. l* 63 P
Frank, E. G., *So. a* 8 E W
Frank, H. H., *Fr. l* or *s* 47 N. Tulane St.
Frank, W. W., *Fr. l* or *s* 47 Univ. Pl.
Franklin, B., Jr., *Fr. a* 39 N E
Franklin, S. F., *g* 117 H S
Franks, J. A. Q., *So. a* 11 P
Frantz, A. M., *Fr. a* Morningside Ave.
Frantz, J. H., *Sr. l* 111 L
FRAZER, D. R., *Trustee* Short Hills, N. J.
Frazier, E. J., *Fr. a* 47 N. Tulane St.
Frazier, E. R., *Sr. a* 1 N D
Frederick, T. L., *Fr. l* or *s* 7 E M W
Freeman, C. P., *Jr. l* 132 L
Frick, R. D., *Jr. l* 43 '79 H
Friend, A. M., Jr., *So. l* or *s* 3 A, C
FRIEND, E. W., *Instructor* 12 N W
Friesell, W. H., Jr., *Fr. ce* 23 M D
Fritz, G. T., *Fr. l* or *s* Hill Annex
Froelich, C. L., *So. a* 14 B
Froelick, H., *So. l* or *s* 43 H
Frontz, C. W., *Fr. a* 32 VanDeventer Ave.
Fullerton, D. B., *Sr. l* 8 W M W
Fundenburg, G. B., *Fr. a* 12 Park Pl.
Furman, J. A., Jr., *Sr. a* 2 A, H'm
Furman, N. H., *Sr. s* 1 W B
Furman, R. W., *Fr. l* or *s* 7 N R

Gabriel, E., *Fr. l* or *s* 15 VanDeventer Ave.
Gadebusch, P. H., *Fr. a* 15 Univ. Pl.
Gaines, L. E., *Fr. l* or *s* Hill
Galbreath, T. M., Jr., *So. a* 74 B
Galt, S., Jr., *So. a* 6 S W
Gamble, C. J., *Jr. l* 22 B
Garber, M. B., Jr., *Fr. a* 15 Univ. Pl.
Gardner, F. W., *Jr. l* 6 S E B
Garlow, H. G., *So. l* or *s* 3 E M W
Garmany, J. B. C., *Fr. a* 14 P
Garner, C. E., Jr., *So. l* or *s* 64 L
GARRETT, R., *Trustee* Baltimore, Md.
Garrison, C. T., *Fr. ce* 73 H
Garthwaite, G., *g* Pennington, N. J.
Garvin, J. A., *So. l* or *s* 2 N D
Gaston, G. H., Jr., *Sr. a* 301 H'm
Gatch, J. N., *Jr. a* 91 B
Gatch, L. G., *Sr. a* 31 H
Gates, M., *Fr. a* 90 P
GAUSS, C., *Professor* 106 Fitz Randolph Rd.
Geddis, C., *So. l* or *s* 16 E W
Geiger, H., *Sr. a* 65 C
GEROULD, G. H., *Ass't Professor* 341 Nassau St.

Ghiselin, C., Jr., *g* 27 B S
Gibson, R. H., *Jr. ce* 24 B
Giffin, P. G., *Fr. l* or *s* 16 Edwards Pl.
Gile, H. H., *So. l* or *s* 84 Nassau St.
Gill, D. L., *Jr. a* 61 L
Gill, F. G., *So. l* or *s* 112 Mercer St.
Gill, L. B., *Fr. l* or *s* 15 Dickinson St.
Gilland, H. G., *Fr. a* 80 U
Gillespie, G., *Fr. ce* 10 W M W
GILLESPIE, W., *Professor* 78 Alexander St.
GILMAN, R. E., *Instructor* 23 Madison St.
Gilmore, J. A., *Sr. a* 45 U
Gilmour, W. R., *Sr. a* 17 W W
Gleason, J. S., *Sr. ce* 103 B
Glenn, J. J., *Fr. l* or *s* 19 Univ. Pl.
Glenn, R. M., *So l* or *s* F, W B
Glick, F., *Fr. l* or *s* 46 Wiggins St.
Glick, G. W., Jr., *Fr. ce* 47 Univ. Pl.
Glogau, W. E., *Fr. l* or *s* 47 Univ. Pl.
Glover, L. L., *Fr. a* 10 S R
Golden, B. I., *Fr. l* or *s* 41 U
Goldsmith, C. E., *Jr. l* 23 L
Goltra, E. F., *Jr. l* 81 H
Good, D. S., *Fr. ce* 39 Univ. Pl.
Goodspeed, J. P., *Jr. l* 81 H
Goodwin, D. R., *Jr. a* 9 S R
Gordon, H. L., Jr., *Fr. l* or *s* 11 Dickinson St.
Gordon, N. T., *Sr. s* 102 B
Gorham, J. H., *Sr. a* 3 B, H
Goslyne, D. S., *Sr. s* 23 N E
GOSMAN, L. N., *Superintendent of Catalogue, University Library* 175 Nassau St.
Gosnell, H. A., *ee* 185 L
Goss, B. C., *Assistant* 26 Bank St.
Gough, R. S., *Sr. l* 142 H
GOULD, H. N., *Assistant* 4 E B
Gould, J. D., *Fr. ce* 75 H
Gould, O. V., *Fr. l* or *s* 19 Univ. Pl.
Graham, T. G., *Jr. ce* 11 M W
Granbery, J. T., *Jr. ce* 4 S M R
Grant, B. M., *Fr. l* or *s* O, U
Green, B. S., Jr., *q* 14 N E
Green, H., *Sr. a* 8 S R
Green, H. R., *q* 84 Nassau St.
GREEN, H. W., *Trustee* Trenton, N. J.
Green, J. S., Jr., *Fr. a* 10 Madison St.
Green, O. S., *So. l* or *s* 133 H
Green, R. M., *Sr. a* 12 A, H
Greene, N. L., *g* Hightstown, N. J.
Gregory, R., *Jr. l* 7 N D
Gribbon, R. B., *So. l* or *s* 5 W W
Griffin, D. DeM., *So. l* or *s* 21 P
GRIFFIN, N. E., *Ass't Professor* 14 N D
Griggs, G. S., *Sr. l* 13 B
Groff, A. D., *Sr. a* 17 N W
Grose, H. B., *f* Merwick
Grundy, J. C., *Sr. a* 92 B
Gussenrode, R. H., *Fr. ce* 15 Univ. Pl.
Gwathmey, A. B., II, *So. l* or *s* 7 L P

Hackney, H. E., *Sr. a* 4 S E
Haddock, W. C., Jr., *Jr. ce* 74 H
Hagar, A. F., *Sr. l* 32 B
Hahn, H. C., *Fr. l* or *s* 14 S D
Haines, W. H., *So. a* 10 M D
HALL, C. R., *Instructor* 16 S W
Hall, F. C., *Sr. l* 33 C
Hall, R. E., *So. l* or *s* 62 Nassau St.
Hall, W. B., *Sr. a* 61 B
Hallstead, W. F., II, *So. a* 14 U P
Hammond, E. H., *So. l* or *s* 61 P
Hammond, J. S., *So. l* or *s* 72 L
Hammond, W. E., *So. a* 6 S R
Hampton, R., Jr., *So. l* or *s* 133 L
HANDY, P. D., *Trustee* New York, N. Y.
Handy, T. P., *Sr. a* 54 '79 H
Hanigan, L. A., *f* 28 VanDeventer Ave.
Hanks, G. R., *So. ce* A, Hill
Hardin, C. R., *So. a* 61 H
Harding, C. C., *Jr. s* 95 B
Harland, J. P., *Sr. a* 5 S E
Harlow, A. G., *Sr. a* 15 L P

HARMON, A. M., *Ass't Professor* 111 Fitz Randolph Rd.
Harmonson, C. L., *Fr. l* or *s* L, U
HARPER, G. McL., *Professor* 36 Mercer St.
Harper, L. K., *Jr. l* 5 S E B
Harrer, G. A., Jr., *f* 31 William St.
Harrer, J. A., *Fr. l* or *s* 42 N E
Harries, W. H., *So. ce* 21 B
Harrigan, A. N., *Fr. l* or *s* 9 S E B
Harrigan, P. B., *Fr. ce* 9 S E B
Harrington, B. C., *Sr. l* 22 N E
Harris, B., *Sr. l* 9 B
Harris, G. E., Jr., *Jr. a* 111 L
Harris, G. L., *Fr. ce* Hill
Harris, R. M., *So. a* 73 B
Harris, T., *q* 54 B
HARRIS, W. B., *Professor* Greenholm
Harrison, F. VanL., *Fr. l* or *s* 33 Bank St.
Harrison, J. DeH., *g* Merwick
Harrop, A., *Sr. s* 9 S D
Harter, W. W. C., *So. l* or *s* 8 N R
Hartman, J. I., *Jr. a* 32 '79 H
Hartmann, H. M., *g* 309 H S
Hartshorne, H., *Jr. l* 22 H'm
HARVEY, E. N., *Instructor* 15 S D
Harvey, H., Jr., *Fr. a* 41 S E
Harvey, H. D., *Fr. l* or *s* 15 Edwards Pl.
Haskell, A. H., *Fr. l* or *s* 17 Edwards Pl.
Hastings, H. W., *Sr. a* 132 H
Hastings, W., *Sr. a* 17 N E
Haupt, H. L., *Fr. a* 10 S M R
Hausmann, A. G., *So. a* 20 N W
Haviland, A. T., *So. l* or *s* 76 H
Hawkins, D. R., *Jr. l* 305 H'm
Hawkins, J. C., *Sr. a* 33 L
Hawley, D. A., *Sr. a* 25 N E
Hay, A. W., *Sr. a* 7 S W
Hayes, A. O., *f* 108 Mercer St.
Hayes, M. J., *So. l* or *s* 7 Aiken Ave.
Hays, W. B., Jr., *Fr. l* or *s* 80 Nassau St.
Hazard, H. W., Jr., *Sr. s* 2 C, H
Healey, J. C., *So. a* 19 N W
Heath, F. R., *Fr. ce* 14 Edwards Pl.
Heath, P. S., *Jr. l* 29 Bank St.
Heath, W. L., *Fr. l* or *s* 11 S E B
Heck, E. B., *Sr. s* 2 W M W
Heddens, B. S., *So. l* or *s* 3 B, H'm
HEERMANCE, R., *Ass't Professor* 58 Univ. Pl.
Heft, E. I., *So. a* 8 E M W
Heintz, J. E., *Fr. l* or *s* 163 L
Heinzelmann, G. M., *So. l* or *s* 62 Nassau St.
Hellyer, H. L., *g* 45 A S
Hemphill, J., *So. l* or *s* 106 P
Hendel, C. W., Jr., *Sr. l* 4 W B
Hendel, J. M., *Jr. l* 6 E W
Henderson, T. W., *Sr. a* 3 S E
Henderson, W. B., *f* 6 Bank St.
Hendricks, T. A., *So. l* or *s* 104 P
Hendrickson, F. D., *So. a* 123 L
Hendrickson, R. S., *Sr. a* 11 M D
HENRY, B., *Trustee* Philadelphia, Pa.
Henry, D. R., *Sr. a* 5 U P
HERRING, D. G., *Instructor* 95 Library Pl.
Hertzog, P. H., *g* Hightstown, N. J.
Hessenbruch, H. M., *Jr. s* 66 H
Hewitt, T., *Fr. a* 18 S M R
Heyl, J. B., *Jr. a* 132 L
Heyl, R. C., Jr., *Fr. a* 45 Univ. Pl.
Heyl, W. E., Jr., *Fr. a* 45 Univ. Pl.
Heyn, W. E., *q* 8 S W B
Heyniger, C. L., *Fr. ce* 32 Mercer St.
HIBBEN, J. G., *President* Prospect
Hibben, T. E., Jr., *Fr. l* or *s* 75 H
Hickernell, L. M., *f* 8 E B
Hidden, I. M., *Sr. a* 84 H
Hildreth, L. P., *Sr. l* 17 N W
Hillhouse, J. G., *Jr. a* 94 P
Hilliard, C. C., *So. l* or *s* 312 H'm
Hills, H. L., *So. a* 6 W M W
Hillyer, L. A., *Jr. a* 10 N R
Hinchliffe, J. D., *Sr. a* 71 B
Hinchman, R. P., Jr., *Fr. l* or *s* 124 L
Hinshaw, J. C. W., *Fr. ce* 39 Wiggins St.

Hirschberg, D. S., *Fr. a*
14 Chambers St.
Hockmeyer, C. E., *Fr. l* or *s*
G, Hill
Hoffman, W., *Sr. l* 11 '79 H
Hogan, R., *q* 20 P
Hogg, T. B., *Jr. a* 41 P
Holbert, R. W., *Jr. l* 5 S E B
Holden, R. P., *So. l* or *s*
2 S E B
Hollander, R. B., *Fr. l* or *s*
19 Univ. Pl.
Holman, R. W., *So. l* or *s*
15 W W
Holmes, J. B., *Fr. a* 20 S W
Holmes, M., *So. a* 19 E W
Holsapple, R. T., *Sr. a* 132 H
Honigman, J. K., *Jr. s* 4 B
Hood, R. N., *So. l* or *s* 8 S M R
Hoopes, R. T., *Sr. a* 5 W B
Hopkins, W. L., *Fr. a* 2 L P
Hormel, J. C., *So. l* or *s* 44 C
Horn, T. L., *So. ce* 9 M D
Hornbrook, G. L., *g*
168 Nassau St.
Horne, W. D., Jr., *Sr. l* 4 A, H
Horner, W. V., *So. l* or *s* 6 S D
Hornor, S. H., *Sr. a* 162 L
Horton, J. L., *So. ce* 9 M D
Hosack, J. P., *So. a* 133 L
HOSKINS, J. P., *Professor*
Absent on leave
Hostetter, D. H., Jr., *q* 21 L
Hough, C. P., Jr., *So. a* 34 '79 H
Houston, A. E., *So. l* or *s* 1 M D
Howard, K., *Sr. a* 171 L
Howard, S. E., *g* 121 Broadmead
Howell, B. F., Jr., *Sr. s* 14 N W
Howell, L. D., *Sr. l* 7 W M W
Hoy, W. E., Jr., *f* 16 Madison St.
Hoyt, J., *Fr. a* 15 Edwards Pl
Hubbell, N. E., *Jr. ce* 34 N E
Hudnut, H. B., *Fr. a* 15 S M R
HUDSON, C. S., *Acting Professor*
31 Bank St.
Hudson, W. J., *Jr. ce* 5 S R
Hughes, J. C., *Jr. l* 33 '79 H
Hughson, W., Jr., *Jr. s* 41 '79 H
HULETT, G. A., *Professor*
Absent on leave
Humphrey, A. F., *So. ce* 12 S W
Humphreys, M., *So. l* or *s* 31 C

HUN, J. G., *Ass't Professor*
150 Mercer St.
HUNT, T. W., *Professor*
72 Library Pl.
Hunter, A., *Fr. a* 15 Edwards Pl.
Hunter, A. H., *Sr. a* 123 H
Hunter, C. B., *Jr. l* 34 H
Hunter, J. B., Jr., *Jr. a* C, E B
Hunter, J. F., *Jr. a* 12 C
Hunter, M. H., *g*
47 N. Tulane St.
Huntley, J. W., *Jr. ce* 7 N M R
Hurlburt, W. M., *Fr. l* or *s* 143 H
Hurst, J. E., *So. l* or *s* 181 L
Hutchinson, L. W., *Sr. ce* 6 A, C
HUTSON, F. L., *Ass't Professor*
The Bachelors
Hutton, J. L., *Sr. ce* 7 S E
Huyler, J. S., *Fr. a* 14 Edwards Pl.
Hyatt, R. A., *Fr. a* 8 N R
Hypes, S. L., *Fr. a* 16 W W

Iaccaci, A. T., *Fr. a*
11 Alexander St.
Ifft, G. N., II, *So. l* or *s*
6 S W B
Ill, C. H., *Jr. s* 15 B
Ill, E. W., *Sr. s* 15 B
Ingersoll, R. S., *Jr. l* 41 '79 H
Ingraham, F., Jr., *Jr. l* 36 P
Ingram, J. E., *g* 215 H S
Irvine, R. L., *Fr. a* 1 S W
Irwin, J. H., *g* 103 H S
Ishikawa, T., *g* 74 B S
Ives, A. H., *Fr. a* P, U

Jacka, C. E., *Fr. l* or *s*
15 Univ. Pl.
Jackman, A., *Fr. l* or *s*
11 Dickinson St.
Jackson, A. H., *Fr. a* 47 Univ. Pl.
Jackson, P. L., *So. l* or *s* 108 P
Jackson, R. M., *Sr. a* 24 H'm
Jackson, T. B., *Fr. l* or *s* 64 B
Jacobs, M. C., *g* 77 B S
JACOBUS, M. W., *Trustee*
Hartford, Conn.
Jameson, D. O. B., *Jr. l* 7 N D
Jamieson, R. W., *g* 211 H S
Jamison, T. P., *Fr. l* or *s*
Edwards Pl.
Jarman, G. W., Jr., *So. a* 123 L
Jarvis, R. Y., *So. a* 12 P

Jarvis, Van B., *Sr. ce* 12 N E
Jefferson, B. L., *f* Merwick
Jenkins, J. E., *Jr. s* 52 B
JENNINGS, A. E., Jr., *Assistant* 32 Wiggins St.
Jermyn, E. B., Jr., *So. ce* 1 U P
Jewett, J. H., Jr., *Jr. a* 4 W W
Jewett, T. R., *So. l* or *s* 12 W W
Jewett, W. vanD., *Fr. l* or *s* 47 Univ. Pl.
John, L. L., *Sr. l* 38 L
JOHNSON, A. C., *Ass't Professor* 34 Bank St.
Johnson, C. W., *Sr. ce* 31 L
Johnson, M. C., *q* 21 H'm
JOHNSON, R. B. C., *Professor* 129 Broadmead
Johnson, W. E., *So. a* 18 W W
Johnston, H. K., *q* 4 E M W
Johnston, J. R., Jr., *Fr. l* or *s* 23 M D
JONES, C. H., *Registrar* Nassau Hall
Jones, C. W., *Sr. l* 142 H
Jones, DeW. C., III, *Sr. a* 84 H
Jones, E. E., *So. a* 21 M D
Jones, W. L., Jr., *So. l* or *s* 141 L
Jordan, B. R., *Fr. l* or *s* 9 N R
Jordan, R., Jr., *Sr. l* 33 H
Jordan, W. E., *g* 415 H S

Kahn, A. M., *Fr. l* or *s* Hill
Kalt, W. MacK., *Fr. l* or *s* 31 Univ. Pl.
Karow, G. L., *Fr. l* or *s* 111 H
Kassler, G. W., *Jr. l* 62 B
Kaufman, I., *So. a* 41 Park Pl.
Kawakami, I., *g* C, B S
Kelleher, A. A., *Fr. a* 15 Dickinson St.
Keller, N. D., *So. a* 33 P
Kellett, R. G., *So. l* or *s* 10 P
Kellett, W. W., *Sr. l* 17 M D
Kellogg, P. V., *Jr. a* 5 S R
KEMMERER, E. W., *Professor* 120 Fitz Randolph Rd.
KENNEDY, C. W., *Ass't Professor* The Peacock Inn
Kennedy, D. G., *Fr. a* 12 Park Pl.
Kennedy, H. H., Jr., *Fr. a* 56 C
Kennedy, J. C., *So. ce* 308 H'm
Kennedy, J. F., *Jr. ce* 1 S E
Kennedy, T. B., Jr., *Jr. ce* 72 B
Kenny, A. T. H., *Fr. a* 11 Univ. Pl.
Kent, M. A., *Jr. ce* 39 U
Kenyon, D. H., *Fr. l* or *s* 15 Univ. Pl.
Kenyon, G. R., *Sr. l* 104 B
Kenyon, N. T., *Fr. l* or *s* 42 B
Kepler, C. C., *So. a* 31 N E
Kerr, H. K., *Fr. l* or *s* Hill
Keyes, C. W., *f* 16 N W
Kidd, W. C., *g* 404 H S
Kidder, A. M., *So. l* or *s* 184 L
Kiefel, E P., *Fr. a* 5 N E
Kieffer, R. J., *ee* 60 Univ. Pl.
Kilner, E. B., *q* 82 Nassau St.
Kimball, A., *Fr. l* or *s* 15 Edwards Pl.
Kimball, C. E., Jr., *Sr. a* 131 H
Kimball, R. B., Jr., *So. a* 25 C
King, W. C., Jr., *Fr. l* or *s* 17 Edwards Pl.
Kingsford, I. B., *Sr. l* 11 '79 H
Kinnan, M. E., *Sr. a* 63 H
Kircher, C. E., *g* 207 H S
Kirk, R. H., Jr., *Sr. a* 5 W B
Kirkpatrick, J. D., Jr., *Fr. ce* 12 M D
Kishinami, T., *g* 95 Mercer St.
Kline, J. M., *So. l* or *s* 61 C
Klipstein, G. P., *Jr. a* 44 B
Klotz, R. L., *Fr. ce* 1 N E
Knapp, H. A., *Fr. a* 36 Bank St.
KNAUTH, O. W., *Instructor* 24 Murray Pl.
Knight, F. H., *Fr. ce* 28 VanDeventer Ave.
Knight, O. D., *Fr. a* 29 N E
Knott, J. P., Jr., *Sr. a* 92 B
Knox, C. Van S., *Sr. a* 7 E W
Knox, W. B., *Fr. a* 11 Alexander St.
Kock, C. E., *Fr. ce* Hill
Koontz, J. V., *g* 302 H S
KOREN, W., *Ass't Professor* 94 Bayard Lane
Krause, W., *So. l* or *s* 22 C
Kruse, F. J., *Fr. l* or *s* 72 U
Kuhn, W. S., *Jr. l* 6 U P

Laird, J. A., *Jr. l* 309 H'm
Lake, D. M., *Fr. l* or *s* 53 Univ. Pl.

Lamarche, E. J., *So. a* 7 E B
Lamberton, H. McC., Jr., *Fr. a* 80 Nassau St.
Landis, W., *Sr. a* 39 U
Larkin, J. A., *Sr. a* 24 '79 H
Larrick, A. R., *g* 27 B S
Larson, J., *Fr. ce* 16 S M R
Laskin, B., *Jr. a* 5 S M R
Laughlin, H. A., Jr., *Jr. l* 7 U P
Law, B. C., *Fr. a* 83 B
Law, E., *Sr. a* 64 '79 H
Lawrence, R. R., *Sr. a* 7 S M R
LeCompte, C. R., Jr., *Jr. ce* 7 S E B
Lee, E. B., *Fr. l* or *s* 17 Edwards Pl.
Lee, E. H., *Fr. l* or *s* 15 S E
Lee, R. C., *Sr. a* 63 '79 H
Legendre, J. H., *q* 101 H
Lemon, W. P., *g* 49 B S
Leslie, A. W., *q* 35 L
Leslie, F. P., *q* 35 L
Lester, H. H., *g* 190 Nassau St.
Lester, R. R., *Fr. l* or *s* 85 P
Levengood, S. L., *So. l* or *s* 10 S W B
Lewey, C. H., *So. a* 2 S M R
LIBBEY, W., *Professor* Thanet Lodge
Lichtenstein, A. B., *Jr. l* 22 L
Liebhardt, F. C., *So. l* or *s* 8 W W
Limond, W. S., Jr., *So. a* 7 S D
Linder, J A., *So. l* or *s* 40 P
Lingle, R. P., *Sr. l* 12 S E B
Link, V. G., *Fr. l* or *s* 32 Wiggins St.
Linn, C. C., *Fr. l* or *s* 27 Univ. Pl.
Linn, J. S., *g* 302 H S
Lloyd, E., Jr., *Jr. l* 113 H
Lloyd, E. S., *Fr. l* or *s* 144 L
Lloyd-Smith, W., *Fr. a* 42 C
Lockwood, R. G., *Sr. l* 94 H
Loeb, A. M., *Fr. l* or *s* 77 U
Loeb, H. A., *Sr. l* 152 L
Logan, G B., Jr., *So. a* 13 E W
Logan, W. J., *Sr. a* 1 W W
LONG, A. W., *Ass't Professor* 29 Cleveland Lane
Long, C. S., *q* 20 E W
Long, T. R., *q* 90 Nassau St.
Long, W. H., Jr., *So. a* 16 C
Longstreth, A. B., *So. l* or *s* 2 D, H
LOOMIS, E. H., *Professor* 302 Nassau St.
Love, W. De L., Jr., *Fr. l* or *s* 11 Alexander St.
Loveland, E. K., *Jr. a* 92 P
Lowe, M. B., *Sr. ce* 97 B
Lowman, E. L., *Sr. ce* 103 B
Lowthorp, F. C., III, *Sr. a* 43 P
LUEHRING, F. W., *Ass't Professor* 66 Wiggins St.
Luke, W. G., *q* 80 P
Lukens, A. W., *Sr. a* 13 B
Lukens, E. C., *So. a* 7 N W
Lynch, J. B., *Sr. ce* 26 Witherspoon St.
Lynd, R. B., *Jr. a* 7 A, H
Lyons, J. J., *So. ce* 194 Nassau St.
Lytle, J. P., *g* 44 B S
Lytle, R. R., Jr., *Sr. a* 17 N E
Lyttle, H. G., *So. l* or *s* 300 H'm

Mabon, T. McC., *Sr. s* 5 S W B
McAleenan, H. A., *Fr. a* Hill
MCALPIN, C. W., *Secretary* Nassau Hall
McAlpin, J. R., *So. l* or *s* 133 H
McArthur, L., *So. l* or *s* 307 H'm
MCCABE, D. A., *Ass't Professor* 25 P
McCahon, G., *g* 300 H S
McCance, P. H., *So. l* or *s* 33 P
MCCAY, L. W., *Professor* 2 Morven St.
MCCLELLAN, G. B., *Professor* The Water Tower
McClellan, R. R., *q* 62 Wiggins St.
MCCLENAHAN, H., *Dean of the College* College Pl.
McClumpha, C. W., *Fr. l* or *s* 106 H
MCCLURE, C. F. W., *Professor* 2 Morven St.
MacColl, J. R., *Jr. l* 10 U P
MCCOMAS, H. C., Jr., *Ass't Professor* 109 Broadmead
McComas, O. P., Jr., *Fr. a* 3 E W
McConnell, J. C., *g* 309 H S
MacConnell, J. G., *So. a* 92 H
MCCORMICK, C. H., *Trustee* Chicago, Ill.
McCoy, C. C., *So. l* or *s* 4 S W
McCoy, J. C., *Sr. l* 13 P
McCracken, W. H., *g* 23 B S

MacCready, P. B., *Fr. l* or *s* 14 S W
MacCready, R. H., Jr., *Fr. l* or *s* 14 S W
McCutcheon, B. S., *So. l* or *s* 54 C
MacDonald, F. C., *Ass't Professor* 12 Nassau St.
McDiarmid, R. J., *f* 14 Prospect Ave.
Mace, W. H., *So. l* or *s* 15 S E W
McEldowney, R., *So. l* or *s* 62 H
McElroy, R. McN., *Professor* 86 Stockton St.
Machemer, P. A. G., *Fr. a* 57 B S
McIlvaine, W. B., *Trustee* Chicago, Ill.
MacInnes, C. R., *Ass't Professor* 14 Vandeventer Ave.
Mack, E., Jr., *Sr. a* 33 N E
McKee, R. H., *Sr. l* 63 H
McKee, R. L., *Fr. l* or *s* 31 Univ. Pl.
Mackenzie, I. D., *So. a* 9 A, H
McKibbin, J. C., *So. a* 1 U P
Mackie, W. H. T., *Fr. a* 9 U P
Mackin, E. H., *Jr. ce* 54 H
McKinney, R. L., *Fr. l* or *s* 111 H
McKittrick, S., *Sr. a* 14 W W
McKown, G. C., *Jr. l* 14 N M R
Macks, R. G., *So. l* or *s* 21 P
McLanahan, A., *ee* 8 Dickinson St.
McLanahan, J. D., *Fr. a* 8 Dickinson St.
McLanahan, S. K., *So. l* or *s* 8 Dickinson St.
MacLaren, M., *Professor* 16 Prospect Ave.
McLaughlin, A. R., *g* 20 B S
McLean, J., *Jr. a* 53 B
McLean, R., *Sr. l* 2 W B
Macloskie, G., *Professor* 239 Nassau St.
McMahon, C. O., *f* 6 Bank St.
MacMahon, J. F., *q* 95 P
McManus, H. G., *So. l* or *s* 21 B
McMaster, P. D., *Jr. s* 102 H
McMillan, C., *Professor* 40 Bayard Lane
MacMillan, E. A., *So. ce* 31 B
McMillan, T. M., Jr., *Sr. a* 5 M D
McPherson, S. J., *Trustee* Lawrenceville, N. J.
McPherson, P. C., *Jr. a* 17 B
McTigue, J. B., *So. ce* 51 B
McWilliams, C. A., *Fr. a* T, U
McWilliams, E. C., *Instructor* 60 Wiggins St.
McWilliams, J. P., *Sr. ce* 15 C
Magai, L. O., *So. a* 8 E M W
Magie, D., Jr., *Professor* 34 Cleveland Lane
Magie, W. F., *Dean of the Faculty* The Dean's House
Magie, W. J., *Trustee* Elizabeth, N. J.
Magill, W. H., *Sr. l* 32 P
Magruder, F. A., *Instructor* 24 Madison St.
Mandel, O., *Fr. ce* 10 E M W
Manheim, S., *Jr. s* 37 S E
March, M. L., *q* 103 P
Markham, S. S., *Sr. l* 7 N E
Marlatt, C. D., *Sr. s* 9 W M W
Marling, F. H., *Sr. a* 41 L
Marquand, A., *Professor* Guernsey Hall
Marshall, L. S., *So. l* or *s* 7 N R
Martin, C. F., *Fr. a* 190 Nassau St.
Martin, H. F., *Fr. l* or *s* M, U
Martin, J. C., *f* 176 The Western Way
Martin, J. T., *So. l* or *s* 22 '79 H
Martin, L., *So. l* or *s* 23 '79 H
Martin, R. S., *Fr. l* or *s* 10 Madison St.
Martins, C., *Superintendent of Purchase, University Library* 176 The Western Way
Mason, W. S., *So. l* or *s* 16 M D
Massie, J. W., *Fr. a* Edwards Pl.
Mather, F. J., Jr., *Professor* 342 Nassau St.
Mathews, C. E., *Ass't Professor* 34 B
Mathiason, K., Jr., *Sr. l* 7 W M W
Mathis, R. J., *Sr. a* 33 H
Matthews, S., *Sr. a* 14 H'm
Mautner, B. H., *Sr. l* 26 M D
Maxfield, C. W., *So. a* 103 H
May, E., Jr., *q* 8 S W B
Mayer, W. F., *Jr. a* 62 L
Mead, S. A., *Jr. l* 21 H'm
Meany, S. L., *Fr. l* or *s* 11 Alexander St.
Meeker, A. R., *So. l* or *s* 13 N W

Meeker, H. H., *Jr. ce* 13 N W
MEEKER, R., *Ass't Professor* 61 Wiggins St.
Meeter, H. H., *g* 16 A S
Meier, E. G., *Fr. a* 15 P
Meigs, J. V., III, *So. a* 84 Nassau St.
Melosh, H. J., *Fr. l* or *s* 32 Wiggins St.
Melville, M., *Fr. l* or *s* 21 Edwards Pl.
Merriam, W. H., *g* 15 B S
Merrifield, C. S., *Sr. a* 13 A, H
Merrill, R. W., *q* 11 W B
Merritt, H. C., Jr., *Fr. ce* 10 M D
Mertz, E. H., *Jr. a* 23 Edwards Pl.
Messinger, C. W., *Jr. l* 12 W B
Messler, D. I., *g* Hightstown, N. J.
Metzerott, K. A., *Fr. l* or *s* 15 VanDeventer Ave.
Meyers, W. E., *Sr. l* 26 M D
Meyrick, C. B. E., *Jr. s* 11 Univ. Pl.
Michael, B. R., *Sr. a* 104 H
Michael, H. I., *Fr. l* or *s* 21 Edwards Pl.
MICHAUD, R., *Ass't Professor* 52 Univ. Pl.
Middleton, W. S., *Jr. a* 16 L
Middour, E. J., *Fr. l* or *s* 10 S E B
MIEROW, C. C., *Instructor* 14 Bank St.
Mierow, H. E., *Jr. a* 29 N E
MILES, L. W., *Ass't Professor* Greenholm
MILLEN, W. B., *Instructor* 30 Jefferson Rd.
Miller, A. P., III, *So. ce* 12 P
Miller, DeL., *So. l* or *s* 4 W M W
Miller, D. Y., *Sr. l* 13 P
Miller, F. L., Jr., *So. a* 101 P
Miller, J. A., *Sr. a* 121 L
Miller, K. P., *g* 315 H S
MILLER, L. H., *Ass't Professor* 13 Chambers St.
Miller, N., *Fr. a* 31 Univ. Pl.
Miller, S., Jr., *Jr. a* 33 '79 H
Milliken, R. A., *Jr. a* 91 B
Millikin, S. A., *Fr. l* or *s* 24 M D
Mills, D. H., *So. a* 11 E B
Miner, R. C., *So. l* or *s* 31 P
Minton, H. C., Jr., *q* 48 U
Mitchell, C. Van S., *Sr. a* 3 L P
Mitchell, E. K., Jr., *Fr. a* 14 Edwards Pl.
MITMAN, C. W., *Assistant* 36 Wiggins St.
Mixsell, D. G., *So. l* or *s* 61 H
Moffat, S. M., *Sr. a* 13 A, H
Molt, P., *Fr. l* or *s* 19 S W
Montgomery, F. A., *Jr. l* 41 P
Montgomery, J. R., *Sr. a* 3 S D
Mooney, W. W., *f* 240 Nassau St.
Moore, C. E., *Jr. a* 84 B
Moore, F. H., *q* 16 Bank St.
Moore, K., *Fr. l* or *s* 70 U
Moore, K. W., *Jr. a* 9 S R
Moore, P. E., *Fr. l* or *s* 32 Mercer St.
MOREY, C. R., *Ass't Professor* Thomson Hall
Morgan, G. O., Jr., *Sr. a* 134 H
Morgan, J. W., *Fr. a* 42 B
Morgan, S. W., *Sr. a* 14 H'm
Morgan, W. T., *Par.* 108 H S
Morrell, F. W., *Sr. a* 20 N E
Morris, A. S., Jr., *So. l* or *s* 9 N D
Morris, L. E., *So. l* or *s* 14 E W
Morris, S. W., *Sr. l* 44 H
Morrisey, C. W., *Jr. a* 13 S D
Morrison, D. S., *So. a* 152 Nassau St.
Morse, W. C. B., *So. a* 3 S W B
MOSELEY, T. A. E., *Instructor* 5 N R
Motheral, P. K., *So. a* 6 S D
Mount, L., *Fr. a* R. F. D. 2
Mudd, S., *Fr. l* or *s* 81 P
Muehleck, G. E., *Jr. a* 6 S R
Muirhead, J. G., *Fr. l* or *s* 11 S E B
Mulford, E. S., *Sr. l* 104 B
Mulford, S. R., *Sr. l* 32 B
Muller, E., Jr., *Jr. a* 7 A, H
Mumford, G. H., *Fr. l* or *s* 41 Univ. Pl.
Mundt, A. J., *So. l* or *s* 19 Univ. Pl.
MURCH, H. S., *Instructor* 1 A, C
Murdock, J. E., *Fr. l* or *s* Trenton, N. J.
Murray, J. B., *Fr. ce* 11 Alexander St.
Murray, J. O., *Jr. l* 93 B

Myers, P. F., *Sr. a* 33 C
Myers, W. B., *Jr. a* 9 E M W
MYERS, W. S., *Ass't Professor* 15 Alexander St.
Myrick, D., *So. l* or *s* 122 L

Napp, J. E., *g* 317 H S
Nebeker, C. M., *Sr. l* 45 U
Nebeker, E. A., *Fr. l* or *s* 14 Edwards Pl.
Neely, J. H., Jr., *Fr. a* 304 H'm
NEHER, F., *Professor* 148 Library Pl.
Nesbitt, R. B., *Jr. a* 12 N D
Neustadt, M. W., *Sr. l* 114 B
Nevin, J., Jr., *Fr. a* K, U
Nevins, T. C., *Jr. l* 29 Bank St.
Newbold, F. E. D., *So. l* or *s* 144 Nassau St.
Newburg, W. B., *Fr. l* or *s* 26 N E
Nichols, C. O., *Fr. l* or *s* Edwards Pl.
Nicholson, T., III, *So. l* or *s* 6 N M R
Nicoll, DeL., Jr., *So. a* 11 P
Nidetzky, C. F., *Fr. a* 15 Dickinson St.
Niles, T. B., *Fr. l* or *s* 32 Wiggins St.
Nimick, F. B., *Sr. s* 60 P
Nimick, T. M. H., *So. a* 141 L
Nissley, W. W., *Jr. ce* 22 S E
Noble, S. R., *Jr. l* 7 B, H
Norman, W. H., *Sr. a* 23 S E
North, J. S., *Sr. l* 5 L P
NORTHRUP, E. F., *Ass't Professor* 30 Wiggins St.
Norton, P. D., *Sr. l* 4 A, H
Norton, W. S., *Jr. a* 4 S W B
Norwood, G. A., *q* 19 Madison St.
Nourse, R., *Jr. l* 18 Madison St.

Oakley, G. W., Jr., *Fr. a* 60 Univ. Pl.
Ober, L., *So. a* 72 H
Ober, R., *Sr. l* 51 '79 H
O'Brien-Moore, A., *Fr. a* V, U
O'Connell, J. H., *Jr. a* 36 L
O'Connor, H., *Sr. l* 83 P
O'Donnell, O., *Sr. s* 2 C, H
O'Donohue, H. B., *Sr. a* A, B
Offield, R. L., *g* 213 H S
Ohashi, Y. S., *ee* 165 Nassau St.
Ohno, N. C., *g* 55 B S
Ohlinger, L. P., *Fr. l* or *s* 9 S W B
O'Kane, J. J., Jr., *Fr. l* or *s* 23 Linden Lane
Olcott, M., *So. a* 26 C
Oliver, A. C., Jr., *Sr. l* 36 Bank St.
O'Neill, J. H., *Jr. l* 143 L
ORMOND, A. T., *Professor* 13 Bank St.
Orth, C. D., Jr., *Sr. l* 54 L
Osborn, E. D., *So. a* 66 C
Osborn, W. H., *Fr. a* 42 C
OSGOOD, C. G., *Ass't Professor* 72 Stockton St.
Osmun, J. E., *Fr. l* or *s* 19 M D
O'Sullivan, D. J., *q* 90 Nassau St.
O'Sullivan, G. J., *So. l* or *s* 42 L
O'Sullivan, H. C., *Fr. l* or *s* 42 L
O'Sullivan, T. C., Jr., *q* 90 Nassau St.
Othen, R. C. T., *g* 107 H S
Otis, J. R. L., *Fr. l* or *s* 47 Univ. Pl.
Ould, T. C., *So. ce* 15 S W
Owlett, G. M., *Jr. s* 34 P

Page, E. C., *Sr. ce* A, B
Page, L. R., Jr., *Sr. ce* A, B
Paine, A. I., *Sr. l* 52 H
Painter, J. L. D., *Jr. l* 43 L
PALMER, S. S., *Trustee* Princeton, N. J.
PARKER, H. O., *Assistant* 18 Madison St.
Parker, S., *q* 164 Nassau St.
Parkin, F. R., *Fr. ce* A, E B
PARROTT, T. M., *Professor* 104 Mercer St.
Parsons, J. H., *Sr. l* 38 L
Parsons, T. D., *So. a* 10 S W
Pate, M., *So. l* or *s* 7 B
PATON, S., *Lecturer* Princeton, N. J.
Patterson, C. B., *g* 6 Bank St.
Patterson, R. W., Jr., *Sr. a* 24 '79 H
Patterson, R. L., *Fr. a* 31 Univ. Pl.
Patton, D. A., *So. ce* 17 E W
PATTON, F. L., *Ex-President* Springdale

PATTON, G. S., *Professor*
Springdale
Paul, J. R., *So. a* 34 C
Payne, F. D., *Fr. a* 112 H
Payson, L. G., *Fr. a*
17 Edwards Pl.
Peacock, G. A., *Fr. l* or *s*
32 Mercer St.
Peacock, R. B., *Fr. l* or *s*
32 Mercer St.
Pearson, J. T., *So. a* 4 U P
Pegram, E. S., Jr., *Jr. ce* 32 H
Pemberton, F. R., *Fr. ce* 68 U
Pendleton, T. T., *Sr. a* 10 E B
Penfield, W. G., *Sr. l* 8 S E
PENNYPACKER, J. G., *Instructor*
12 S E
Perkins, C. B., *Sr. l* 2 W M W
Perlman, S., *So. l* or *s*
Trenton, N. J.
Perry, R. F., *g* Pennington, N. J.
Peters, J. B., *g* 415 H S
Pettit, D., *Fr. l* or *s* R. F. D. 3
Phelps, W. M., *Fr. l* or *s*
19 Edwards Pl.
PHILLIPS, A. H., *Professor*
54 Hodge Rd.
Phillips, F. T., *Sr. s* 8 A, H
Phillips, G. A., *So. a* 1 E B
Phillips, G. F., *Jr. a* 23 L
Phraner, S. L., *Fr. a*
11 Dickinson St.
Piel, R., *Sr. l* 44 H
Piel, W., *Fr. l* or *s* 31 Univ. Pl.
Pierce, F. L., *So. l* or *s* 96 B
Pierce, J., Jr., *Jr. l* 60 Hodge Rd.
Pierce, R. A., *Fr. l* or *s*
19 Univ. Pl.
Pierce, V. U. D., *Fr. l* or *s*
15 Edwards Pl.
Pierson, R. N., *Jr. a* 14 '79 H
Pitcairn, G. L., *Fr. l* or *s*
21 Edwards Pl.
Pitney, G. S., *Jr. a* 14 '79 H
Pitney, J. B., *Jr. a* 52 '79 H
PLACE, C. I., *Instructor*
11 Chambers St.
Platt, H., *ee* 185 L
Plaxco, M. R., *g* 34 B S
Plimpton, R. A., *Jr. a* 4 S R
Pomeroy, R. B., *g* 10 Nassau St.
Pope, M., *Fr. l* or *s* 86 Nassau St.
Porter, E., *g* 115 H S
Porter, H. F., *So. l* or *s* 3 N E
Porter, R. B., *q* 115 H S
Potter, C. A., Jr., *Jr. l* 101 H
Potter, T., *So. a* 115 B
Potts, E. L., *Fr. a* 19 Bank St.
PRENTICE, W. K., *Professor*
34 Cleveland Lane
PRESTON, K., *Instructor*
24 Bank St.
Price, A. K., *Fr. ce* 9 N R
Price, H. S., *Fr. ce* 41 B
Prickett, W., *So. a* 3 W M W
PRIEST, G. M., *Professor*
10 Nassau St.
PROCTER, W. C., *Trustee*
Cincinnati, O.
Proctor, C. S., *q* 40 Moore St.
Purdy, R. W., *So. l* or *s* 6 N D
Putnam, O. S., *So. l* or *s* 63 C
Puttkammer, E. W., *Jr. a* 92 P
Pyle, G. J., *Jr. l* 12 E W
Pyne, H. R., *Jr. a* 27 C
PYNE, M. T., *Trustee*
Princeton, N. J.

Queen, J. M., *Fr. l* or *s*
90 Nassau St.
Quinby, R., *So. l* or *s* 300 H'm
Quinn, E. L., *f* Jefferson Rd.

Randolph, A. F., *Sr. a* 8 W M W
Randolph, R. S. F., *Jr. l* 310 H'm
RANKIN, W. M., *Professor*
5 Evelyn Pl.
Ransom, L., *Fr. a* 11 S E
Rauch, R. S., *Sr. l* 5 L P
Ray, W. K., *So. a* 2 A, C
RAYCROFT, J. E., *Professor*
120 Broadmead
Raymond, H. C., *Sr. l* 3 W W
Raymond, J M., Jr., *Fr. a* 64 B
Read, B. C., *So. l* or *s* 2 W W
Read, M. E., *Sr. l* 2 W B
REDFIELD, J. H., *Instructor*
27 William St.
Redmond, G. L., *Fr. l* or *s* 10 L F
Reed, N., *Fr. a* 12 Park Pl.
Reed, R. E., *q* 72 B
Reese, H. K., *Sr. l* 26 S E
Reeve, W. F., III, *Jr. l* 12 U P
Reeves, J. W., *g* Hightstown, N. J.

REEVES, P., *Assistant*
18 Madison St.
Reeves, R. H., *So. ce* U, U
Rehm, H. W., *So. l* or *s* 7 M D
REID, A. G., *Instructor*
30 Jefferson Rd.
Reid, R. I., *So. ce* 121 H
Reinke, E. E., *f* 36 Wiggins St.
Rentschler, G. A., Jr., *So. l* or *s*
86 Nassau St.
Reynolds, S. C., *Fr. a* 102 P
Reynolds, S. H., Jr., *So. l* or *s*
53 '79 H
Reynolds, W. F., *So. a* 7 S D
Rheem, E. D., *Sr. l* 52 H
Rhoads, B. K., *Jr. l* 3 A, H'm
Rhoads, J. R., *Fr. l* or *s* 43 B
Ricca, A. V., *So. a* 2 N E
Rich, J. J., *Sr. a* 32 S E
Richards, G. T., Jr., *Jr. ce* 43 U
Richards, L., *Sr. a* 54 '79 H
Richardson, A. S., *Sr. a* 13 S W
Richardson, C., Jr., *So. l* or *s* 31 P
RICHARDSON, E. C., *Librarian*
220 Mercer St.
Richardson, F. M., *g*
31 Edwards Pl.
Richardson, H. J., *Fr. l* or *s* Hill
RICHARDSON, O. W., *Professor*
105 Fitz Randolph Rd.
Richardson, P., *Sr. l* 65 H
Riedel, H. A., *Fr. l* or *s*
12 Park Pl.
Riegel, G. F., *So. a* 2 B, C
Rife, R. S., *f* 63 B S
Riker, A., Jr., *Jr. a* 32 '79 H
Riker, C. B., *Sr. s* 97 B
Rineman, G. W., *Fr. l* or *s*
15 Univ. Pl.
Ritchey, H. D., *Fr. a* Hill
Ritter, J. B., *Fr. l* or *s* 74 U
ROBBINS, E. Y., *Professor*
144 Library Pl.
Roberts, E. M., *So. l* or *s* 10 A, H
Roberts, F. C., Jr., *Fr. l* or *s* 94 B
Roberts, W. P., *Jr. a* 31 '79 H
Roberts, W. vanB., *So. l* or *s* 11 C
Robertson, D. J. C., *Sr. l* 154 L
Robertson, F. I., *Jr. l* 16 S E
Robertson, G. S., *g* 12 Maple St.
Robertson, M. T., *So. l* or *s* 154 L
Robinson, A. C., III, *Jr. a* 4 S R
Robinson, G., *q* 64 H
Robinson, H. R., *Fr. l* or *s* 63 B
Robinson, J. B., *So. l* or *s* 45 U
Robinson, J. N., *Fr. l* or *s* 51 H
ROBINSON, P. E., *Ass't Professor*
128 Broadmead
Robinson, R. E., *Sr. l* 12 H
Robinson, R. H., *g* 42 A S
Robinson, S. MacM., *So. a* 14 A, H
Robinson, S. S., *Fr. a* 56 B S
Robinson, T. H., *Jr. a* 17 B
Roche, R. T., *ee* 13 N D
Rockey, K. H., *Fr. l* or *s*
47 N. Tulane St.
ROCKWOOD, C. G., Jr., *Professor*
Princeton Inn
Roddey, W. J., Jr., *q*
32 VanDeventer Ave.
Rodgers, F. R., *Fr. a*
14 Dickinson St.
Roebling, S., *Jr. ce* 24 L
Rogers, E. A., *Sr. l* 24 N E
Rogers, N. T., *Jr. a* 1 E M W
Roll, R. G., *So. l* or *s*
Trenton, N. J.
ROOT, R. K., *Ass't Professor*
6 A, H
Ropes, L. G., *Fr. a* 7 Park Pl.
Rose, J. B., *So. l* or *s* 92 H
Rose, J. McK., *Sr. a* 3 S M R
Rose, R. W. P., *Fr. a*
32 VanDeventer Ave.
Rosenberg, S. C., *So. l* or *s*
19 S W
Ross, H. M., *Sr. s* 11 N W
Ross, J. E., *g* 308 H S
Ross, R. J., *Sr. l* 2 S W B
Rothschild, W. N., *Sr. l* 4 L P
Rowland, C. R., *Jr. l* 66 L
Rowland, R., *So. a* 26 C
Rowley, J. B., *Sr. l* 9 W M W
Roy, D. M., *Sr. a* 7 S W
Runk, G. S., Jr., *Fr. ce*
39 Wiggins St.
Runyon, P. M., *Fr. l* or *s*
16 Edwards Pl.
Rushmore, R., *Fr. ce* 47 Univ. Pl.
Rusk, W. S., *So. a* 4 N M R
RUSSELL, A. D., *Trustee*
Princeton, N. J.

Russell, A. D., Jr., *q* 27 C
Russell, B. B., *So. l* or *s* 6 S E B
Russell, E. T., *So. a* 20 N W
RUSSELL, H. N., *Professor* 79 Alexander St.
Russell, J., Jr., *Fr. a* 19 Bank St.
Russell, R. McW., Jr., *g* 11 A S
RUTH, T. DeC., *Instructor* 8 N W
Rutter, T. R., *Sr. l* 65 H

Salmon, H. H., Jr., *So. l* or *s* 53 L
Salter, D. W., *So. l* or *s* 1 S E B
Sampson, E., *Jr. ce* 5 B
Samuel, H. N., *So. ce* 43 H
Sanford, L. H., *So. l* or *s* 121 H
Sargent, H. E., *Fr. a* Edwards Pl.
Savage, H. L., *So. a* 16 VanDeventer Ave.
SAWYER, H. L., *Assistant* Jefferson Road
Sayre, J. F., *g* 41 Park Pl.
Scanlan, W. G., *Jr. ce* 26 Witherspoon St.
Scannell, R. H., *So. l* or *s* 10 W W
SCHELLENS, R., *Instructor* Nassau Club
Schenck, C. F., *g* 25 M D
Schenck, W. P., *Sr. a* Princeton, N. J.
Schmidt, J. B., *Jr. a* 12 S D
Schoepf, A. K., *So. l* or *s* 86 Nassau St.
Schwabacher, H. S., *Fr. l* or *s* 66 U
Schweitzer, F., *So. a* 35 N E
SCOON, R. M., *Instructor* 6 Madison St.
SCOTT, W. B., *Professor* 56 Bayard Lane
SCRIBNER, C., *Trustee* New York, N. Y.
Scribner, C., Jr., *Sr. a* 3 L P
Scribner, G. K., *Sr. a* 102 B
Scudder, G. F., *Sr. a* 6 N W
Scudder, M., *Fr. a* 79 U
Scudder, N. W., *Fr. a* 53 Univ. Pl.
Scull, E., *Jr. l* 22 P
Sealy, R., *Sr. l* 94 H
Sealy, W. W., *So. l* or *s* 90 Nassau St.
Seggerman, K. M., *Sr. a* 121 L
Seiberling, W. P., *So. l* or *s* 2 S D
Selby, A. N., *Fr. l* or *s* Hill
Selby, J. A., *Sr. l* 8 B, H
Sellers, L. W., *Fr. a* 64 U
Semmens, C. G., *Fr. a* 19 Univ. Pl.
Semmes, R., *Sr. a* 44 '79 H
Semple, J. R., *Sr. ce* 15 N W
Severance, F. R., *So. l* or *s* 4 S E B
Seymour, L. D., *Fr. l* or *s* 15 Edwards Pl.
Shackelford, W. T., Jr., *Jr. l* 21 H
Shafer, S. R., *f* 109 P
Shanbacker, F. M., *Fr. l* or *s* 143 H
Shand, J., Jr., *Sr. a* 24 H'm
Shaner, I. H., *Jr. ce* 5 S W
Shanley, W. C., Jr., *Fr. l* or *s* 15 Univ. Pl.
Shapley, H., *f* Merwick
Shapley, J., *f* Merwick
Sharp, E. C., *So. l* or *s* 11 N M R
Shaw, H. D. V., *Jr. l* 82 B
Shaw, J. P., *So. l* or *s* 42 Wiggins St.
Shea, C. B., *Fr. l* or *s* 11 H'm
Shea, E. L., *Fr. ce* 15 Dickinson St.
SHEA, J. B., *Trustee* Pittsburgh, Pa.
Shear, H. R., *g* 202 H S
Sheets, E. A., Jr., *Fr. l* or *s* G, U
SHELDON, E. W., *Trustee* New York, N. Y.
Shenk, W. J., *Jr. ce* 21 '79 H
Shenstone, A. G., *Jr. s* 105 P
Shepherd, J. H., *Fr. l* or *s* 32 VanDeventer Ave.
Sheppard, A. S., *g* 29 B S
Sheppard, H. R., *So. a* 5 A, C
Sherrard, J. B., *Jr. a* 2 E W
Shipman, G. M., Jr., *Fr. l* or *s* 5 A, H
SHIPMAN, H. R., *Ass't Professor* 27 Mercer St.
Shively, J. C., *q* 120 Alexander St.
Shoemaker, S. M., Jr., *Fr. a* 11 U P
Short, A. P., Jr., *Fr. l* or *s* 29 Edwards Pl.
Siedler, C. P., *So. ce* 1 L P

Sikes, F. G., Jr., *So. l* or *s* 23 B
Sikes, G. G., *Fr. a* 23 B
Sills, K. L., *So. a* 71 P
SILVESTER, C. F., *Assistant* 200 Nassau Hall
Silvester, L. V., *Sr. a* 19 S M R
Simons, D. MacL., *ee* 7-10 S E
Simons, J. F., *Sr. a* 29 S E
Simpson, E. R., *Sr. l* 2 S W B
SINCLAIR, W. J., *Instructor* 30 Mercer St.
Slaymaker, S. E., Jr., *Jr. l* 2 M D
Slee, J. N., *q* 62 '79 H
Sloan, E. W., *So. l* or *s* 23 P
Small, C. R., *f* 16 N W
Smalshaf, A. J., *Jr. ce* 276 Nassau St.
Smith, A. D., *Sr. a* 15 N E
Smith, C. R., *Fr. l* or *s* 14 Edwards Pl.
Smith, D. C., *So. a* 9 N W
Smith, D. J., *Sr. s* 8 A, H
SMITH, D. P., *Ass't Professor* The Peacock Inn
SMITH, E. A., *Ass't Professor* 8 E B
Smith, E. B., *f* Merwick
SMITH, E. S., *Instructor* 11 Bank St.
Smith, G. S., *Fr. l* or *s* Hill
SMITH, H. S. S., *Professor* 58 Univ. Pl.
Smith, J. K., *Jr. s* 82 B
Smith, J. L., *Sr. a* 2 B
Smith, J. M., *So. a* 41 C
Smith, J. McI., *So. l* or *s* 11 E B
Smith, K. B., *Sr. l* 13 '79 H
SMITH, K. K., *Instructor* 47 Spring St.
Smith, K. M., *q* 10 N D
SMITH, N. KEMP, *Professor* 106 Broadmead
Smith, W. M., Jr., *So. a* 41 C
Smith, W. R., *Sr. l* 27 S E
Smouse, M. C., *So. l* or *s* 73 P
SMYTH, C. H., Jr., *Professor* 22 Morven St.
Smyth, C. P., *Fr. a* 22 Morven St.
Snowden, A. H., *Fr. l* or *s* 13 L
SPAETH, J. D., *Professor* 32 Edgehill St.
Spa'ding, E. D., *Jr. s* 122 H
SPAULDING, E. G., *Ass't Professor* 82 P
Speer, C. E., *So. l* or *s* 61 P
Speers, J. M., Jr., *Fr. a* 10 S D
Speers, P. C., *Jr. s* 2 E B
Speir, F. C., *Sr. a* 64 C
SPENCER, C. W., *Ass't Professor* 114 Fitz Randolph Rd.
Spencer, L. H., *Sr. s* 71 B
Spencer, M A., *Jr. a* 51 L
Spencer, W. M., *So. a* 184 L
Staehle, R. H., *Sr. s* 30 P
Stahl, L. A., *q* 8 L P
Stanford, P. D., *ee* 16 Park Pl.
Starbuck, E. D., Jr., *Jr. l* 63 P
Starr, I., Jr., *Fr. l* or *s* 10 Madison St.
Starr, W. K., *Fr. ce* R. F. D.
Stavig, E. O., *g* 204 Nassau St.
Stearns, J. N., III, *Jr. a* 52 '79 H
Steele, R. W., Jr., *Sr. a* 11 W B
Steinert, W. G., *q* 81 B
Stephens, A. W., *So. l* or *s* 9 A, H
Stephens, L. W., *g* 37 B S
STERRETT, C. H., *Instructor* 24 C
Stetson, J. M., *g* 16 Bank St.
STEVENS, E. A., *Instructor* 45 Univ. Pl.
Stevens, M. H., *Fr. l* or *s* 60 U
Stevenson, A. R., Jr., *Jr. ce* 83 Mercer St.
Stevenson, H. R., *Fr. l* or *s* 41 N E
Stewart, C. I., *Fr. ce* 15 Univ. Pl.
STEWART, G. B., *Trustee* Auburn, N. Y.
STEWART, J. A., *Trustee* New York, N. Y.
Stewart, J. Q., Jr., *So. l* or *s* 19 W W
Stewart, W., *g* 3 A S
Stewart, W., *So. a* 6 S W
Stickney, L. C., *Sr. l* 21 N E
Stillwell, R. N., *Fr. l* or *s* I, U
Stockton, G. B., *Jr. l* 32 C
Stockton, J. R., *Fr. l* or *s* 11 A, H
Stockton, K. E., *Jr. l* 111 L
Stokes, T. O., *Sr. a* 53 Park Pl.
Story, W. C., *Sr. l* 70 P
Stover, E. C., Jr., *So. l* or *s* 311 H'm
Stover, J. D., *g* 10 N R
Strain, R., Jr., *Jr. l* 34 S E

Strater, L. G., *Fr. ce* 31 Univ. Pl.
Straus, R. W., *Sr. l* 63 L
Strebel, G. E., *Jr. a* 81 B
Street, C., *So. a* 5 E B
Streit, J. B., *So. ce* 19 Madison St.
Stringfellow, E. E., *f* 204 Nassau St.
Strong, L. B., *Fr. a* 17 Bank St.
STUART, D. C., *Ass't Professor* The Western Way
STUART, D. R., *Professor* 101 Broadmead
Stuart, H. C., *Jr. l* 172 L
Stueck, D. D., *Fr. l or s* 28 VanDeventer Ave.
Stukes, S. G., *g* 21 A S
Stump, A. H., *Jr. ce* 141 H
Sullivan, A. J., *Sr. l* 16 N E
Sullivan, J. D., *So. l or s* 53 L
Sullivan, J. J., Jr., *Sr. ce* 45 U
Summers, E. F., *Fr. l or s* 1 E W
Sutphen, J. S., Jr., *So. l or s* 22 H
Suydam, H. W., *Sr. a* 27 M D
SUYDAM, V. A., *Instructor* 200 Nassau St.
SWANSON, A. A., *Assistant* 229 Nassau St.
Swart, I. E., *So. l or s* 42 P
Swart, W. S., *So. l or s* 42 P
Swatland, D. C., *Fr. a* 11 W W
Sweet, H. K., *So. l or s* 113 B
Sweet, L., *Fr. a* 85 P
Swift, J. A., *Sr. l* 72 P
SWIFT, E., *Ass't Professor* 80 Murray Pl.
Swineford, J. A., *q* 35 S E
Swofford, J. J., Jr., *So. a* 2 S D

Taeusch, C. F., *q* 5 E M W
Talley, A. W., *Fr. a* 14 S D
Tancock, M. A., *Fr. l or s* 12 S W B
Tappen, C. M., *Fr. a* 36 S E
Tatnall, H. C., *Jr. a* 113 H
Taylor, B. K., *Jr. s* 36 L
Taylor, C. C., *Fr. l or s* 14 Chambers St.
Taylor, G. B., *f* 6 Bank St.
Taylor, W. S., *Sr. a* 9 W B
Terry, M. C., *So. l or s* 6 W B
THAYER, H. W., *Ass't Professor* 10 Nassau St.
Thayer, L. J., *So. l or s* 84 Nassau St.
Thomas, A. R., *So. l or s* 4 N R
Thomas, K. C., *Jr. l* 33 B
Thomas, P. E., *So. l or s* 124 H
Thomas, R. B., Jr., *Sr. a* 2 B
Thomas, W. R., Jr., *So. l or s* 68 L
THOMPSON, H. B., *Trustee* Greenville, Del.
THOMPSON, H. D., *Professor* 11 Morven St.
Thomson, F. C., *g* 29 A S
Thomson, J. W., Jr., *Fr. l or s* 11 Dickinson St.
Thorington, J. M., *So. l or s* 108 P
Tilton, J. K., *Sr. l* 52 L
Tippetts, C. S., *Fr. l or s* 36 S E
Tippetts, W. B., *Jr. a* 39 S E
Todd, W. N., *Sr. l* 31 H
Tomlinson, N. B., *Fr. l or s* 15 E W
Towers, C. D., *Fr. l or s* 11 Univ. Pl.
Townsend, T. W., *Fr. l or s* 10 N M R
Towson, C. E., *So. l or s* 42 S E
Traub, V. A., *Sr. a* Murray-Dodge
Traylor, M. G., *Fr. l or s* Hill
Trenkmann, E., *So. ce* 182 L
Trenkmann, F., *So. ce* 182 L
TROWBRIDGE, A., *Professor* Hodge Rd.
Trowbridge, A. L., *Sr. a* 83 P
Troyer, J. N., *Sr. a* 31 S E
Turner, D. G., *Fr. l or s* H, U
Turner, J. R., *f* 20 Bank St.
Turner, P. De W., *Sr. l* 22 M D
Turtle, W. O'H., *q* 37 N E
Twaddell, J. P., *Fr. l or s* 15 Dickinson St.
Twelvetrees, F. R., *Jr. a* 25 S E
Twitchell, P. E., *Fr. l or s* 41 B
Tyler, D. B., *Fr. l or s* 32 VanDeventer Ave.

Uebelacker, A. A., *Fr. l or s* 102 P
Uhl, J. R., *Fr. l or s* 40 P
Underhill, A. M., *Fr. l or s* 31 Univ. Pl.
Underhill, J. B., Jr., *Fr. l or s* 161 L
Updike, G. H., *q* 3 A, H

Upson, E. R., *So. l* or *s* 124 H

VAIL, J. I. B., *Assistant* 11 S W
van Buren, J. H., *Fr. l* or *s* Hill Annex
van Buren, J. N., *Fr. l* or *s* Hill Annex
Van Cleve, R. L., *Sr. ce* 162 Nassau St.
Van Court, A. E., *Jr. l* 34 H
Vanderhoef, H. B., *Fr. ce* 14 Chambers St.
van der Voort, H. F., Jr., *Fr. l* or *s* Hill Annex
VAN DEVENTER, H. B., *Ass't Professor* 12 Nassau St.
VanDeventer, L., *So. l* or *s* 7 S R
van Doren, H. S., *So. l* or *s* 276 Nassau St.
Van Dusen, E. T., *So. a* 72 L
Van Dyke, E. N., *Fr. l* or *s* 47 N. Tulane St.
VAN DYKE, H., *Professor* 59 Bayard Lane
VAN DYKE, P., *Professor* 89 Library Pl.
Van Horn, H. W., *Fr. ce* 80 Nassau St.
VAN INGEN, G., *Ass't Professor* 115 Broadmead
Van Leer, W. L., *So. l* or *s* 23 C
VAN NEST, J. S., *Ass't Professor* 37 Cleveland Lane
Van Olinda, D. R., *q* 190 Nassau St.
VAN RENSSELAER, A., *Trustee* Philadelphia, Pa.
Van Vliet, B. F., *Sr. a* 105 H
Van Wesep, H., *f* 36 VanDeventer Ave.
VAN WINKLE, C., *Instructor* 10 Nassau St.
Van Wyck, S. B., *Fr. a* 31 Univ. Pl.
Vardell, C. G., Jr., *Jr. a* 98 B
Vasbinder, J. W., *Sr. l* 11 N E
VEBLEN, O., *Professor* Morningside Ave.
Velte, F. M., *So. a* 14 M D
Vickery, J. C., *Fr. l* or *s* 67 U
Vincent, R. G., *Jr. l* 33 B

Voorhees, G. R., *So. l* or *s* Trenton, N. J.
Voorhees, W. W., *Jr. ce* 49 Wiggins St.
Voris, P. C., *g* 315 H S
Vreeland, H., Jr., *Sr. l* 6 A, C
VREELAND, W. U., *Professor* 180 Mercer St.
Vroman, J. C., Jr., *Jr. l* 2 B, H'm

Wadsworth, J. V., *Fr. l* or *s* 7 E M W
Walbridge, E. A., *So. l* or *s* 2 N D
Walker, E., *Par.* 34 A S
Walker, J. N. T., *Sr. s* 71 H
Wall, A. T., Jr., *Jr. l* 51 C
Wall, E. B., *Fr. l* or *s* 11 U P
Wallace, G. C., Jr., *So. ce* 144 Nassau St.
Wallace, R. C., *Sr. l* 73 L
Waller, E. C., *So. ce* 2 N M R
Waller, H. E., *Jr. ce* 21 '79 H
Wallower, H. H., *Jr. a* 71 L
Walters, A. W., *So. a* 34 '79 H
Walton, L. B., *Fr. a* 9 S W B
WARD, C., *Lecturer* New Brunswick, N. J.
Ward, C. R., *f* 204 Nassau St.
Ward, D. L., *Fr. a* 11 Dickinson St.
Ward, G., *So. l* or *s* 53 '79 H
Warde, F. A., *So. a* 20 W W
WARDWELL, E. H., *Assistant* 19 Linden Lane
Ware, M. W., *g* 12 Edgehill St.
Warfield, W., *f* Merwick
Warner, R., *Sr. l* 41 L
WARREN, H. C., *Professor* 133 Library Pl.
Washburn, F. C., *Sr. s* 41 H
Washburn, L. M., *So. a* 3 W M W
Waterman, A. T., *Sr. a* 18 N W
Watrous, J. H., *Sr. l* 3 C, H'm
Watson, R. G., *Jr. l* 14 L
Watson, W. C., *g* 405 H S
Watt, D. B., *Fr. a* 62 P
Watt, J., *g* 42 A S
WEDDERBURN, J. H. M., *Ass't Professor* 95 Mercer St.
Weidig, J. K., *Jr. ce* 3 B
Weil, F. T., *Sr. l* 104 H
Weir, N. D., *Sr. l* 12 '79 H

Weisberg, H., *Fr. ce*
17 Alexander St.
Wells, H. M., *Jr. a* 11 H
Wells, W. L., *Fr. l* or *s*
16 Bank St.
Wensley, W. R., *Sr. a* 5 N D
WERTENBAKER, T. J., *Instructor*
23 Madison St.
Wesson, D. M., *Jr. ce*
82 Nassau St.
WEST, A. F., *Dean of the Graduate School* 90 Bayard Lane
West, R., *g* Merwick
West, W. A., *Fr. a* 1 S W
WESTCOTT, J. H., *Professor*
200 Mercer St.
Weston, K. E., *g* Nassau Club
Whaler, C. E. H., *So. a* 14 S M R
Whaley, E. A., *Jr. ce* 41 P
Whipple, T. K., *Sr. a* 32 L
Whitaker, G. P., *Sr. a* 82 H
Whitcomb, F., Jr., *Fr. ce* 1 L P
White, A. L., *Jr. s* 2 S E
White, N. R., *Sr. a* 64 H
White, T. R., Jr., *So. a* 183 L
White, W., *Fr. l* or *s*
28 VanDeventer Ave.
Whitehouse, C. E., Jr., *So. l* or *s*
3 N R
WHITNEY, G. W. T., *Ass't Professor* 27 William St.
Wichers, J., *g* 413 H S
Wiese, A. C., *Fr. l* or *s*
7 Park Pl.
Wight, G. K., *Sr. a* 91 H
Wigton, E. N., *Jr. ce* 32 C
Wilkin, J. H., *Sr. l* 116 B
Williams, A., *f* 16 Park Pl.
Williams, D. H., *So. l* or *s* 3 N R
Williams, G. A., *So. ce*
62 Nassau St.
Williams, H. A., *Fr. a* 46 L
Williams, J. L. B., *Jr. a* 44 B
Williams, R., *q* 131 L
Williams, R., Jr., *So. a* 44 L
Williams, R. B., *Sr. a* 24 L
Williams, R. B., *So. a* 53 P
Williams, S. B., *ee* 5 S W
Williams, W. C. R., *q* 30 P
Williamson, A. C., *g* 202 H S
Williamson, W. J., Jr., *So. l* or *s*
95 B
WILLOUGHBY, W. F., *Professor*
118 Library Pl.
Willoughby, W. R., *Fr. l* or *s*
63 U
WILLSON, F. N., *Professor*
Stony Brook
Wilmarth, R. K., *Fr. l* or *s*
11 Dickinson St.
Wilson, D. E. J., *Jr. a* 65 B
Wilson, E., Jr., *Fr. a* 1 B, H'm
Wilson, T. A., *Sr. l* 11 S D
Wilson, Y. L., *So. a* 11 B
Winant, F., Jr., *So. l* or *s* 2 U P
Winant, J. G., *q* 7 U P
Winants, F. H., *Jr. l* 8 S E B
Winchell, H. B., *Fr. a* 13 N M R
WINTRINGER, G. C., *Secretary of Business Administration*
University Offices
WINSTON, J. E., *Instructor*
42 Mercer St.
Wisner, G. T., *Sr. a* 53 H
Wolf, W. J., *Jr. a* 15 L
Wolfe, E. T., *Fr. l* or *s*
80 Nassau St.
Wolfe, W. B., *Sr. l* 63 '79 H
Wolff, F. R., *Fr. l* or *s*
15 Edwards Pl.
WOOD, C., *Trustee*
Washington, D. C.
Wood, C. L., *So. l* or *s* 7 B
Wood, E. B., *So. l* or *s* 17 S E
Wood, J. K., *Fr. l* or *s* 16 B
Wood, L. E., *So. l* or *s* 16 M D
Wood, W. N., *Jr. a* 3 A, H'm
Woodbridge, C. L., *Fr. a* 403 H S
Woodman, E. F., *So. l* or *s* 25 C
Woodrow, F. W. Mc M., *q*
13 W W
Workman, R. Du B., *Par.* 7 B S
Wortendyke, R. J., Jr., *Fr. a*
7 W B
Worthington, F. D., *Sr. a* 9 E B
Worthington, T., Jr., *So. ce*
12 M D
WRIGHT, J., *Art Reference Librarian* Art Museum
Wyeth, J. A., Jr., *So. a* 100 P

Yeiser, H. C., Jr., *So. l* or *s*
131 L
Young, C. M., *Fr. a* 39 Univ. Pl.

INDEX

	PAGE
Abbreviations	472
Absence from Examination	291
from Classes	306
Academic Department:	
Courses of Instruction	132
Faculty	127
Year	305
Admission, see also Terms of,	
for Asiatic Students	97
from other colleges	98
to Electrical Engineering School	209
to Graduate School	214
to Special Courses	97
Alden, R. P., Memorial Prize	372
Alexander Hall	320
Allotment of Rooms	355
Alumni Associations	412
Representation	65
Trustees	18
American Whig Society	344
Anatomical Laboratory	339
Anatomy, Instruction in	191, 274
Annual Expense, Estimate of	354
Archaeological Collection	337
Archaeology, Instruction in	141, 238
University Fellowship	224
Architecture, Instruction in	141, 238
Art, Instruction in	141, 238
Art Museum	342
Asiatic Students, Admission	97
Astronomical Observatories	329
Astronomy, Department of	193, 266
Fellowship	224
Library	287
Athletics:	
Brokaw Field	347
Golf Links	349
Gymnasium	348
University Field	347
Attendance, Regulation of	306
Atwater, L. H., Prize	366
Autograph-Manuscript Collection	283
Baird Prizes	365
Bennett, Philo Sherman, Prize	368
Bergen Collection	284
Biblical Literature, Instruction in	168
Biddle, Francis, Essay Prize	373
Bills, University	363
Biological Laboratories	339
Biology, Department of	190
Fellowships	223, 224, 227
Instruction in	190, 273
Library	287, 339
Blair Hall	325
Board of Trustees	17
Meetings of	19
Botanical Collections	336
Botanical Laboratory	339
Botany, Instruction in	191, 274
Boudinot Fellowships	225, 226
Brackett Physics Library	287
Brokaw Field and Memorial Building	347
Brown, David, Hall	324
Buildings	315
Bureau of Student Self Help	388
Burr, Aaron	56
Butler Scholarship	381
Butler Tract	316
Calendar	10
Campbell Hall	326
Campus	315
Carnahan, James	62
Catalogues	9
Certificates of Preparation for Admission	69, 94
of College Entrance Board	94
of Proficiency	98
Chapel, Marquand	319
Chapel Exercises, Attendance on	307
Charitable Fund	387
Charter of University	48
Chemical Laboratories	333
Chemistry, Department of	183
for Admission	93
Fellowships	225, 228
Instruction in	183, 270
Choate Prizes	369
Choice of Electives	305
Civil Engineering, Department of	118, 200
Terms of Admission	80
Course of Study	118
Courses of Instruction	200
Laboratory	340
Class Exercises, Attendance on	306
Class of 1859 Prize	366
Class of 1860 Fellowship	224
Class of 1861 Prize	373
Class of 1869 Prize	367
Class of 1870 Prizes	371, 373
Class of 1873 Fellowship	227
Class of 1875 Library	284
Class of 1876 Memorial Prize	368

	PAGE
Class of 1877 Fellowship	223
Class of 1878 Library	282
Class of 1878 Scholarships	383
Class of 1883 Fellowships	226
Class of 1883 Library	282
Class of 1883 Prizes	372
Class of 1889 Library	282
Classical Fellowship	224
Classical Seminary	286
Classics, Department of	144
Honors Course in...108,	146, 303
Instruction in	144, 241
Clio Hall Collection	285
Cliosophic Society	344
College Entrance Examination Board	94
College Fellowships	226
Rooms, see Dormitories.	
Colonial Wars, Society, Prize	370
Commencement Exercises	309
Speakers	297
Committees of Faculty	42
of Graduate Council	411
of Trustees	19
Conditions	291
Contents	3
Council, Graduate	411
Converse Scholarships	382
Courses of Instruction:	
Academic	132
Scientific	173
Civil Engineering	200
Electrical Engineering	209
Graduate	229
Cuyler Hall	327
Cuyler, Theodore, Scholarship	229
Cytology, Instruction in	273
Dean's House	317
Degrees:	
Bachelor of Arts	103
Bachelor of Letters	103
Bachelor of Science	103
Civil Engineer	118
Doctor of Philosophy	216
Electrical Engineer	213
Master of Arts	215
Degrees conferred 1911-1912	391
Department Libraries	286
Departments of the University	125
Dickinson, Jonathan	56
Dickinson Hall	318
Dickinson Prize	371
Dining Halls	362
Directors of Seminaries	280
Directory	473
Dod, Albert B., Hall	324
Dormitories	323
E. M. Fellowship	227
E. M. Museum	336
Economic Seminary	286
Economics, Instruction in	135, 236
Edwards Hall	324
Eighty-six Memorial Building	349
Electives, Choice of	305
Electrical Engineering, School of	209
Buildings and Apparatus	331
Fellowships	225, 228
Embryology, Instruction in	192, 273
Endowed Scholarships	377, 380
Engineering, Civil, see Civil Engineering Department.	
Engineering, Electrical, see Electrical Engineering, School of.	
Library	287
English, Department of	158
Fellowships	224, 227
for Admission	86
Instruction in	158, 252
Seminary	286
Entrance Fee	71
Examinations, Dates of	71
Examinations, Places of	74
Requirements	78
Subjects	81
Ethics, Instruction in...133,	134, 230
Evolution, Instruction in	230, 274
Examinations for Admission	71
Absence from	291
Mode of Conducting	291
Preliminary	69
Excuses for Absence from Examination	291
Experimental Science Fellowship	224
Expenses	353
Faculty and Instructors	20
Academic	127
Scientific	170
Faculty Meetings	13
Fees	353
Fellows	418
Fellowships:	
College	226
University	220
Financial Aid, see Remission of Tuition.	
Fine, H. B.	66
Finley, Samuel	60
Fitz Randolph Gate-Way	322
Form of Bequest	66
French, for Admission	90
Instruction in	164, 259
Freshman Class	455
Freshman Entrance Subjects	81
Freshman Year, Course of Study	104
Funds for Candidates for Ministry	387
Gansevoort Scholarship	383
Gardner Graduate Scholarship	229
Garrett Collection of Coins	285
Garrett Collection of MSS	284
Gelston, W. R., Scholarship	385
General Honors	299
Orders	305
Summary of Officers and Students	469
Geodesy, Instruction in, see under Courses of In-	

	PAGE
struction, Civil Engineering Department.	
Geological Collections	337
Laboratories	338
Geology, Department of	187
Instruction in	187, 271
Library	287
German, for Admission	89
Instruction in	162, 256
Germanic Seminary	286
Golf Club	349
Gothic, Instruction in	256
Grades, See Standing.	
Graduate College	218
Graduate Council	411
Graduate Hall	218
Graduate School	214
Admission to	214
Courses of Instruction	229
Degrees	215
Scholarships	228
Students, List of	418
Graduation	297
Fee	353
Honors	297
Graphics, Instruction in	196, 200
Greek, for Admission	82
Instruction in	144, 241
Green, Ashbel	62
Green, A. W., Scholarship	383
Green, Chancellor, Fellowship	227
Green, John C., School of Science, See School of Science.	
Grounds and Buildings	315
Guyot Hall	333
Gymnasium	348
Halls, see Literary Societies.	
Hall Libraries	288
Hamilton Hall	327
Harvard Fellowship in Chemistry	225
Hibben, J. G.	66
Histological Collection	336
Laboratory	339
Histology, Instruction in	192, 273
Historical Seminary	286
History and Government of the University	45
History, for Admission	81
Fellowship	225
Instruction in	135, 232
Holder Hall	326
Holidays, See Calendar.	
Honorary Degrees, 1911-1912	392
Honors Course in Classics,	108, 146, 303
Honors Course in Mathematics and Physics	175, 180, 300
Honors Conferred, 1911-1912	399
General and Special	299
Honor System in Examinations	291
Hospital, see Infirmary.	
Humphreys, Mary C., Prizes	371
Hutton Collection of Death Masks	285
Hygiene, Mental, Lectures on	311
Hygiene and Physical Education	195
Icelandic, Instruction in	258
Indo-Iranian, Instruction in	240
Infirmary, Isabella McCosh	321
Instruction, Courses of:	
Academic	132
Scientific	173
Civil Engineering	200
Electrical Engineering	209
Graduate	229
Instruction, Method of	115
Italian, Instruction in	165, 166
J. S. K., Mathematical Fellowships	223
Jackson Scholarship	383
Jacobus, Porter Ogden, Fellowship	221
John C. Green School of Science, See School of Science.	
Joline, C. O., Prize	367
Junior Class	439
Orator Contest	344, 370
Junior Year, Course of Study	108
Jurisprudence, Instruction in	136
Kaye, Thomas and Lucy, Scholarships	385
Kennedy Scholarships	381
Laboratories and Museums	329
Laboratory Fees	353
Latin, for Admission	83
Instruction in	144, 245
Laughlin Field	316
Lectures, Public	39, 310
Lee, Ivy L., Collection	285
Library, University	281
Librarians	281
Lindsley, Philip	62
Literary Societies	344
Lithuanian, Instruction in	257
Little Hall	325
Log College	45
Logic, Instruction in	132
Long, Mahlon, Scholarship	382
Lynde Prize Debate	365
Maclean Prize	370
Maclean, John	63
Marquand Art Library	287
Marquand Chapel	319
Mathematical Seminary	286
Mathematics, for Admission	91
Department of	173
Fellowships	223
Honors Course in	175
Instruction in	173, 264
Maule, Francis Hinton, Fellowship	224
McCormick Scholarship	381
McCosh, Alexander Guthrie, Prize	365
McCosh, Andrew J., Memorial Scholarships	384
McCosh Hall	322
McCosh, Isabella, Infirmary	321
McCosh, James	64

	PAGE
MacDonald, Gordon, Fellowship	225
Meetings of Board of Trustees	19
Mental Hygiene, Lectures	311
Mental Philosophy, Instruction in	132
Merwick	218
Method of Undergraduate Instruction	115
Miller, Samuel, Collection	284
Mineralogical Collections	337
Mineralogy, Instruction in	188, 272
Modern Languages, Department of	162
Fellowship	226
Moral Philosophy, Instruction in	132, 229
Morgan Collection of Virgils	283
Morphological Museum	336
Munn, Orson Desaix, Fellowship	225
Museums and Laboratories	329
Music Library	284
Nassau Hall	316
Natural Science Museum	335
Neurology, Instruction in	192
New York Herald Prize	368
Observatory, Halsted	329
of Instruction	329
Office Hours	8
Officers of the University	40
Olden Farm	316
Orange Scholarship	374
Orator Contest, Junior	370
Orris Fund	384
Osteology, Instruction in	191
Other Colleges, Admission from	98
Packard Scholarships	385
Page, John Harding, Classical Fellowship	224
Painting, Instruction in	142
Palaeontology, Instruction in	188, 272
Library	287
Palaeontological Laboratory. Collections	338 337
Palmer Physical Laboratory.	330
Partial Courses	98
Paton Spanish War Collection	283
Patterson Collection	284
Patton, Francis L.	64
Patton Hall	326
Patton, J. L., Scholarship	382
Pecuniary Aid, see Remission of Tuition.	
Petrology, Instruction in	189, 272
Philadelphian Society	344
Philosophy, Department of	132
Fellowship	227
Instruction in	132, 229
Philosophical Seminary	280
Physical Geography, Instruction in	199, 275
Laboratory of	338
Physics, for Admission	92
Department of	178
Instruction in	178, 267
Honors Course in	180
Physiological Laboratory	339
Pierson Civil War Collection	283
Plaut, Albert, Chemical Fund	311
Political Economy, Instruction in	135, 236
Political Seminary	286
Physiology, Instruction in	193, 275
Politics, Instruction in	135, 236
Porter Law Library	284
Potts, George, Bible Prizes	366
Prayers, see Public Worship.	
Preceptorial System	115
Preliminary Examinations	69
Princeton University Collection	284
Princeton University Press	349
Princeton University Store	350
Prizes	365
Prizemen, 1911-1912, 401, 403,	406, 408
Procter, Charlotte Elizabeth, Fellowships	221
Pro-Seminaries	114
Prospect	318
Psychological Laboratory	330
Psychology, Instruction in	132, 230
Public Lectures	39, 310
Worship	309
Pyne Buildings	325
Pyne, Robert Stockton, Scholarship	383
Qualifying Students	466
Qualitative Analysis, Instruction in	184
Quantitative Analysis, Instruction in	185
Queen, Jas. W., Scholarship	228
Rea, G. B., Scholarship	384
Registration, Rules for	305
Regulations for General and Special Honors	299
Infirmary	307
of Attendance	306
Religion, Philosophy of, Instruction in	133
Religious Societies	344
Remission of Tuition	375
Removal of Conditions	291
Rental of Rooms	355
Requirements for Entrance	78
Residence of Students, see Directory.	
Reunion Hall	323
Roberts, A. B., Scholarship.	384
Romance Seminary	286
Room Rent	355
Rooms, see Dormitories.	
Rules Governing Allotment and Rental of	355
St. Paul's Society	345
Sanskrit, Instruction in	168, 240
Sayre Fellowships	228
Scholarships:	
Endowed	377, 380